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**UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA**

HOWARD CLARK and MICHAEL SIMS on  
behalf of themselves, those similarly situated  
and the general public,

Plaintiffs,

v.

PERFECT BAR, LLC,

Defendant.

Case No:

CLASS ACTION

**COMPLAINT FOR:**

**VIOLATIONS OF CAL. BUS. &  
PROF. CODE §§17200 *et seq.*; CAL.  
BUS. & PROF. CODE §§17500 *et seq.*;  
CAL. CIV. CODE §§ 1750 *et seq.*; N.Y.  
GEN. BUS. L. § 349; N.Y. GEN. BUS. L.  
§ 350; BREACH OF EXPRESS &  
IMPLIED WARRANTIES**

DEMAND FOR JURY TRIAL

## TABLE OF CONTENTS

INTRODUCTION.....	1
JURISDICTION & VENUE.....	2
INTRADISTRICT ASSIGNMENT.....	2
PARTIES.....	2
FACTS .....	3
I.    There Has Been a Recent Rise in Human Sugar Consumption .....	3
II.   The Body’s Physiological Response to Excess Sugar Consumption.....	8
A.   The Body’s Response to Glucose .....	8
B.   The Body’s Response to Fructose.....	11
C.   The Addiction Response .....	12
III.  There Has Been a Dramatic Rise in Obesity & Chronic Disease That Parallels the Rise in Human Sugar Consumption .....	13
IV.  There is Substantial Scientific Evidence That Excess Sugar Consumption Causes Metabolic Syndrome, Cardiovascular Disease, Type 2 Diabetes, and Other Morbidity.....	14
A.   Excess Sugar Consumption Causes Metabolic Syndrome .....	14
B.   Excess Sugar Consumption Causes Type 2 Diabetes .....	18
C.   Excess Sugar Consumption Causes Cardiovascular Disease .....	22
D.   Excess Sugar Consumption Causes Liver Disease .....	24
E.   Excess Sugar Consumption Causes Obesity .....	25
F.   Excess Sugar Consumption Causes Inflammation .....	30
G.   Excess Sugar Consumption Causes High Blood Triglycerides and Abnormal Cholesterol Levels.....	32
H.   Excess Sugar Consumption is Associated with Hypertension.....	36

I.	Excess Sugar Consumption is Associated with Alzheimer’s Disease, Dementia, and Cognitive Decline.....	38
J.	Excess Sugar Consumption is Linked to Some Cancers .....	39
K.	Based on the Scientific Evidence, Authoritative Scientific and Health Organizations Recommend Restricting Added Sugar Consumption to Below 5% or 10% of Daily Calories.....	40
V.	Defendant’s Marketing and Sale of the High-Sugar “Perfect Bars” .....	41
A.	The High-Sugar Perfect Bars’ Composition .....	43
B.	The Perfect Bars’ Misleading Packaging and Labeling Claims .....	44
C.	Defendant Deceptively Omits, Intentionally Distracts From, and Otherwise Downplays the Bars’ High Added Sugar Content.....	50
VI.	The Labeling of the High-Sugar Products Violates California, New York, and Federal Laws and Regulations .....	51
A.	Any Violation of Federal Food Labeling Statutes or Regulations is a Violation of California and New York Law .....	51
B.	The High-Sugar Products’ False and Misleading Labeling Claims Render Them Misbranded .....	52
C.	The Products are Misbranded Because they Bear Nutrient Content Claims without Complying with the Requirements for Making those Claims.....	53
VII.	Plaintiffs’ Purchase, Reliance, and Injury .....	58
	CLASS ACTION ALLEGATIONS .....	62
	CAUSES OF ACTION .....	64
	FIRST CAUSE OF ACTION .....	64
	SECOND CAUSE OF ACTION .....	66
	THIRD CAUSE OF ACTION .....	67
	FOURTH CAUSE OF ACTION .....	69

1	FIFTH CAUSE OF ACTION .....	70
2	SIXTH CAUSE OF ACTION .....	70
3	SEVENTH CAUSE OF ACTION.....	73
4	EIGHTH CAUSE OF ACTION .....	73
5	NINTH CAUSE OF ACTION.....	75
6	PRAYER FOR RELIEF.....	76
7	JURY DEMAND .....	77

1 Plaintiffs Howard Clark and Michael Sims on behalf of themselves, all others  
2 similarly situated, and the general public, by and through their undersigned counsel, hereby  
3 sue Defendant Perfect Bar, LLC (“Defendant”), and allege the following upon their own  
4 knowledge, or where they lack personal knowledge, upon information and belief, including  
5 the investigation of their counsel.

## 6 **INTRODUCTION**

7 1. A vast body of reliable scientific evidence establishes that excessive  
8 consumption of added sugar—any amount above approximately 5% of daily caloric intake—  
9 is toxic to the human body and greatly increases the risk of cardiovascular disease, diabetes,  
10 liver disease, and a wide variety of other chronic diseases.

11 2. Despite the compelling evidence that sugar acts as a chronic liver toxin,  
12 detrimentally affecting health, and despite that as much as 24% of the calories in “Perfect  
13 Bars” (the “Products”) come from added sugar, Defendant markets and label these so-called  
14 “health food” bars with health and wellness claims with the goal of increasing the price and  
15 sales of its high-sugar bars.

16 3. The claims, designed to appeal to health conscious consumers, however, are  
17 deceptive because they are incompatible with the dangers of the excessive sugar  
18 consumption to which the Products contribute.

19 4. Plaintiffs, who were deceived into purchasing the Products, bring this action  
20 challenging Defendant’s deceptive conduct on behalf of themselves and all other similarly  
21 situated consumers in the United States alleging violations of California’s Consumer Legal  
22 Remedies Act (Cal. Civ. Code §§ 1750, *et seq.*, “CLRA”), Unfair Competition Law (Cal.  
23 Bus. & Prof. Code §§ 17200, *et seq.*, “UCL”), False Advertising Law (Cal. Bus. & Prof.  
24 Code §§ 17500, *et seq.*, “FAL”), New York’s Unfair and Deceptive Business Practices Law,  
25 N.Y. Gen. Bus. L. § 349 (“UDBP”) and False Advertising Law, N.Y. Gen. Bus. L. § 350  
26 (“NY FAL”). Plaintiffs also allege breaches of express and implied warranties under  
27 California and New York state law.  
28

1           5.     Plaintiffs primarily seek an order compelling Defendant to cease marketing the  
2 high-sugar Products using deceptive claims.

3                               **JURISDICTION & VENUE**

4           6.     This Court has jurisdiction over this action pursuant to 28 U.S.C. §  
5 1332(d)(2)(A), the Class Action Fairness Act, because the matter in controversy exceeds the  
6 sum or value of \$5,000,000 exclusive of interest and costs. In addition, more than two-thirds  
7 of the members of the class reside in states other than the state in which Defendant is a citizen  
8 and in which this case is filed, and therefore any exceptions to jurisdiction under 28 U.S.C.  
9 § 1332(d) do not apply.

10          7.     The Court has personal jurisdiction over Defendant because it is incorporated  
11 and headquartered in California, and has purposely availed itself of the benefits and  
12 privileges of conducting business activities within the State of California through the  
13 intentional promotion, marketing, distribution, and sale of the high-sugar Products in  
14 California.

15          8.     Venue is proper in the Northern District of California pursuant to 28 U.S.C. §  
16 1391 because Plaintiff Clark resides in this district, many of the acts and transactions giving  
17 rise to this action occurred in this district, and because Defendant has intentionally availed  
18 itself of the laws and markets within this district through the promotion, marketing,  
19 distribution and sale of the high-sugar Products in this district and is subject to personal  
20 jurisdiction in this district.

21                               **INTRADISTRICT ASSIGNMENT**

22          9.     This civil action arises out of transactions, which occurred in San Francisco  
23 County. Pursuant to Civil Local Rule 3-2(c), (d), this action is correctly assigned to the San  
24 Francisco or Oakland Division.

25                               **PARTIES**

26          10.    Plaintiff Howard Clark is a resident of San Francisco County and citizen of  
27 California.

28          11.    Plaintiff Michael Sims is a resident of Albany County and citizen of New York.

12. Defendant Perfect Bar, LLC is a Delaware Corporation with its principal place of business at 3931 Sorrento Valley Blvd., Suite 100, San Diego, California 92121. Perfect Bar, LLC manufactures, distributes, and markets the Products. Defendant claims on its website (perfectbar.com) that the Products were created in “Sunny San Diego,” and each Product label lists a San Diego address. Perfect Bar CEO and founder, Bill Keith, has made statements in the media that the executive staff are located in Sorrento Valley, while the bars are manufactured in Miramar. Based on a reasonable investigation, Defendant does not appear to maintain any corporate offices outside of California.

### **FACTS**

#### **I. There Has Been a Recent Rise in Human Sugar Consumption**

13. Sugars are sweet, short-chain, soluble carbohydrates. Simple sugars are called monosaccharides, while disaccharides are formed when two monosaccharides undergo a condensation reaction. The three most common sugars in our diets are fructose, glucose, and sucrose. Other sugars, like lactose, found in milk, and maltose, formed during the germination of grains like barley, are not generally consumed in large amounts. Glucose is a monosaccharide that occurs naturally in fruits and plant juices and is the primary product of photosynthesis. Most ingested carbohydrates (like bread and pasta) are converted into glucose during digestion, and glucose is the form of sugar transported around the body in the bloodstream, and used by the cells for energy. Fructose is a monosaccharide that occurs naturally in fruits and honey. It is the sweetest of the sugars. Sucrose is a disaccharide comprised of one molecule of glucose chemically linked to one molecule of fructose. It is found in sugar cane and beets. Common table sugar is sucrose. During digestion and prior to blood absorption, enzymes called sucrases cleave a sucrose molecule into its constituent parts, glucose and fructose.

14. Humans’ consumption of sugar has shifted dramatically over time. Cro-Magnon men during the Paleolithic age were hunters and gatherers, with a diet mainly comprised of meat, high in protein, moderate in fat, and low in carbohydrates. Fruits and

1 berries were the major source of carbohydrates, and starch consumption was low.<sup>1</sup> In 1200  
2 B.C., a process was developed in India for extracting sugar in the form of cane juice called  
3 khanda, which is where the word “candy” comes from. For nearly 3,000 years, sugar was  
4 rare, reserved for nobility. The invention of the pot still in 1700 A.D., however, allowed  
5 mass production of refined sugar. But it was still extraordinarily expensive until the middle  
6 of the 18th century, when there was a worldwide growth in sugar production, including in  
7 America. Thus, humans have been consuming sugar in substantial amounts for less than 300  
8 years.

9 15. For most of that time, Americans’ sugar consumption was almost exclusively  
10 table sugar, with only small amounts of glucose and fructose ingested from fruit.<sup>2</sup> And sugar  
11 was a condiment, added to coffee or tea, with control over the amount eaten.

12 16. In the 1960s, the food industry developed technologies to extract starch from  
13 corn, then convert it to glucose, some of which could then be converted to fructose, leading  
14 to the development of corn-derived sweeteners, most notably high-fructose corn syrup  
15 (HFCS).<sup>3</sup> Although HFCS is comprised of both fructose and glucose, unlike with sucrose,  
16 the fructose is not chemically bound to the glucose in a new molecule. Thus the fructose in  
17 HFCS is referred to as “free” fructose. HFCS can be produced with different fructose-to-  
18 glucose ratios. The most common are HFCS-42 and HFCS-55, containing 42% and 55%  
19 fructose. Some HFCS, however, can be as much as 90% fructose, i.e., HFCS-90. Food  
20 manufacturers have recently begun referring to HFCS-90 on food label ingredients  
21 statements as simply “fructose.”  
22

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23 <sup>1</sup> Tappy, L., et al., “Metabolic Effects of Fructose in the Worldwide Increase in Obesity,”  
24 *Physiology Review*, Vol. 90, 23-46, at 24 (2010) [hereinafter “Tappy, Metabolic Effects of  
25 Fructose”].

26 <sup>2</sup> *Id.*

27 <sup>3</sup> *Id.* (citation omitted).  
28



17. Fructose is sweeter than either glucose or sucrose. In fruit, it serves as a marker for foods that are nutritionally rich. Before the development of the worldwide sugar industry, fructose in the human diet was limited to items like honey, dates, raisins, molasses, figs, grapes, raw apples, apple juice, persimmons, and blueberries (which contain approximately 10-15% fructose). Food staples like milk, vegetables, and meat have essentially no fructose. Thus, until relatively recently, human beings have had little dietary exposure to fructose.<sup>4</sup>

18. But the low cost and long shelf-life of HFCS has contributed to a rapid increase in its consumption over the last 45 years, and thus the consumption of fructose. Between 1970 and 2000, the United States' yearly per capita HFCS consumption went from 0.292 kg per person, to 33.4 kg per person, a greater than 100-fold increase.<sup>5</sup>

19. Today, the majority of sugars in typical American diets are added to foods during processing, preparation, or at the table.<sup>6</sup> The two primary sources of added sugar in processed food are HFCS and sucrose (i.e., granulated sugar used, for example, in baked goods). Added sugar is in more than 74% of processed foods,<sup>7</sup> under more than 60 different names.<sup>8</sup> Although the tendency is to associate sugar with sweets, added sugar is found in many savory processed foods, like bread, soup, and pasta sauce.

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<sup>4</sup> Bray, G., "How bad is fructose?," *American Journal of Clinical Nutrition*, Vol. 86, 895-96 (2007) [hereinafter, "Bray, How Bad is Fructose?"].

<sup>5</sup> Bray, G.A., et al., "Consumption of high-fructose corn syrup in beverages may play a role in the epidemic of obesity," *American Journal of Clinical Nutrition*, Vol. 79, 537, 537, 540 (2004) [hereinafter "Bray, HFCS Role in Obesity Epidemic"].

<sup>6</sup> U.S. Dep't of Agric. & U.S. Dep't of Health & Human Servs., "Dietary Guidelines for Americans, 2010," at 27 (2010) *available at* <http://www.health.gov/dietaryguidelines/dga2010/DietaryGuidelines2010.pdf>.

<sup>7</sup> Ng, S.W., et al., "Use of caloric and non-caloric sweeteners in US consumer packaged foods, 2005-9," *Journal of the Academy of Nutrition and Dietetics*, Vol. 112, No. 11, 1828-34 (2012).

<sup>8</sup> Some examples: Agave nectar, Barbados sugar, Barley malt, Barley malt syrup, Beet sugar, Brown sugar, Buttered syrup, Cane juice, Cane juice crystals, Cane sugar, Caramel, Carob

20. There has been a rise over the past 45 years in Americans' consumption of added sugars. From 1970 to 2000, there was a 25% increase in available added sugars in the U.S.<sup>9</sup> The American Heart Association found that between 1970 and 2005, added sugars available for consumption increased by an average of 76 calories per day, from 25 teaspoons (400 calories) to 29.8 teaspoons (476 calories), a 19% increase.<sup>10</sup> The Continuing Survey of Food Intake by Individuals from 1994 to 1996 showed that the average person had a daily added sugars intake of 79 grams, equal to 316 calories and about 15% of energy intake. Those in the top one-third of fructose consumption ingested 137 grams of added sugars per day (548 calories, about 26% of energy per day), and those in the top 10% of fructose consumption ingested 178 grams of fructose per day (712 calories, about 34% of energy).<sup>11</sup>

21. In 2014, researchers analyzing data obtained from National Health and Nutrition Examination Survey (NHANES) showed that during the most recent period of

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syrup, Castor sugar, Coconut palm sugar, Coconut sugar, concentrated fruit juices, Confectioner's sugar, Corn sweetener, Corn syrup, Corn syrup solids, Date sugar, Dehydrated case juice, Demerara sugar, Dextrin, Dextrose, Evaporated cane juice, Free-flowing brown sugars, Fructose, Fruit juice, Fruit juice concentrate, Glucose, Glucose solids, Golden sugar, Golden syrup, Grape sugar, High-Fructose Corn Syrup (HFCS), Honey, Icing sugar, Invert sugar, Malt syrup, Maltodextrin, Maltol, Maltose, Mannose, Maple syrup, Molasses, Muscovado, Palm sugar, Panocha, Powdered sugar, Raw sugar, Refiner's syrup, Rice syrup, Saccharose, Sorghum Syrup, Sucrose, Sugar (granulated), Sweet Sorghum, Syrup, Treacle, Turbinado sugar, and Yellow sugar.

<sup>9</sup> Bray, How Bad is Fructose?, *supra* n.4, at 895 (citing Havel, P.J., "Dietary fructose: implications for dysregulation of energy homeostasis and lipid/carbohydrate metabolism, *Nutrition Reviews*, Vol. 63, 133-57 (2005) [hereinafter, "*Havel, Dietary Fructose*"]).

<sup>10</sup> Johnson, R.K., et al., on behalf of the American Heart Association Nutrition Committee of the Council on Nutrition, Physical Activity, and Metabolism and Council on Epidemiology and Prevention, "Dietary Sugars Intake and Cardiovascular Health: A Scientific Statement From the American Heart Association," *Circulation*, Vol. 120, 1011-20, at 1016-17 (2009) [hereinafter "*AHA Scientific Statement*"].

<sup>11</sup> Bray, How Bad is Fructose?, *supra* n.4, at 895.

2005-2010, the mean percent of calories from added sugar in the American diet was 14.9%. Most adults, 71.4%, consumed 10% or more of their calories from added sugar, while about 10% of adults consumed 25% or more of their calories from added sugar.<sup>12</sup>

22. While the availability and consumption of added sugars was increasing over the past several decades, documents published in September 2016 demonstrated that “[t]he sugar industry paid scientists in the 1960s to play down the link between sugar and heart disease and promote saturated fat as the culprit instead . . . .”<sup>13</sup> The documents show, for example, that “the Sugar Research Foundation, known today as the Sugar Association, paid three Harvard scientists the equivalent of about \$50,000 in today’s dollars to publish a 1967 review of research on sugar, fat and heart disease.”<sup>14</sup> Due to the effort of the sugar industry and its supporters, U.S. food policy, including FDA rulemaking, for many decades inappropriately focused on fats, largely ignoring the detrimental health consequences of consuming excessive added sugar, leading to the obesity and type 2 diabetes epidemics present in the U.S. today.

23. Today, “the vast majority of the U.S. population exceeds recommended intakes of . . . added sugars.”<sup>15</sup> Despite some reduction in added sugar intake recently, “intakes of

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<sup>12</sup> Yang, Quanhe, et al., “Added Sugar Intake and Cardiovascular Diseases Mortality Among US Adults,” *Journal of the American Medical Association*, at E4-5 (published online Feb. 3, 2014) [hereinafter, “Yang, NHANES Analysis”].

<sup>13</sup> Anahad O’Connor, “How the Sugar Industry Shifted Blame to Fat,” *New York Times* (Sept. 12, 2016).

<sup>14</sup> *Id.*

<sup>15</sup> U.S. Dep’t of Agric. & U.S. Dep’t of Health & Human Servs., “Scientific Report of the 2015 Dietary Guidelines Advisory Committee: Advisory Report to the Secretary of Health and Human Services and the Secretary of Agriculture,” at 26 (February 2015), *available at* <http://www.health.gov/dietaryguidelines/2015-scientific-report/PDFs/Scientific-Report-of-the-2015-Dietary-Guidelines-Advisory-Committee.pdf>.

added sugars are still very high . . . and are well above recommended limits . . . .”<sup>16</sup>  
 Approximately 90% of the population exceeds recommended daily limits.<sup>17</sup>

## **II. The Body’s Physiological Response to Excess Sugar Consumption**

### **A. The Body’s Response to Glucose**

24. The body needs some glucose, largely to meet the brain’s metabolic demands, but also because all living cells use glucose for energy. Blood glucose levels below 25mg/dL may result in coma, seizure, or death, while levels consistently exceeding 180 mg/dL can cause long-term damage, including renal failure and atherosclerosis.

25. For these reasons, blood glucose concentration is tightly-regulated by homeostatic regulatory systems. When blood glucose rises after a meal, beta cells in the pancreas secrete insulin into the blood, which helps muscle, fat, and liver cells absorb the glucose for energy, lowering the blood sugar. Too little blood sugar stimulates the secretion of hormones that counteract the insulin and thus restore normal blood sugar.<sup>18</sup>

26. During certain steps in processing glucose, the body forms fructose. However, unlike with glucose, there is no biological need for dietary fructose, i.e., fructose consumed from food, whether fruit, honey, HFCS, or some other form. Moreover, unlike glucose, fructose does not directly stimulate insulin secretion.

27. The body processes glucose and fructose differently. With little processing, fructose passes through the small intestine, into blood bound for the liver, so that it is taken up nearly 100% for processing in the liver (a characteristic shared by substances commonly referred to as poisons). By contrast, glucose is both “burned up” by cells directly, and

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<sup>16</sup> *Id.* at 38.

<sup>17</sup> *Id.* at 35.

<sup>18</sup> Ludwig, David S., “The Glycemic Index: Physiological Mechanisms Relating to Obesity, Diabetes, and Cardiovascular Disease,” *Journal American Medical Association*, Vol. 287, No. 18, 2414-23, at 2415 (May 8, 2002) (citation omitted).

1 processed elsewhere outside the liver, so that the liver must process only 20% of glucose  
2 consumed.

3 28. So much glucose is burned up prior to liver processing, because all the body's  
4 cells contain a transporter that, when stimulated by insulin, takes in glucose from the blood.  
5 By contrast, fructose can only be absorbed by cells that contain a different transporter, which  
6 most cells lack.

7 29. The liver is capable of processing relatively small amounts of sugar, meted out  
8 slowly. This is one of the reasons that eating the fructose in fruit is not problematic: the sugar  
9 in fruit is encased in the fruit's fiber, which slows the sugar's uptake, and some sugar encased  
10 in fruit fiber may not even be released. Thus fruit consumption does not overwhelm the liver.  
11 Notably, adding fiber to foods that are high in sugar does not replicate this effect, because  
12 the sugar and fiber remain separate, and the sugar is not encased in the fiber like it is in fruit.  
13 Fruit also comes packaged with nutrients, like vitamins, that are beneficial for health, and  
14 sends satiation signals to the brain, telling it that the body is full.

15 30. Because the liver has some capacity to process sugar, there does appear to be a  
16 "safe" threshold of daily added sugar consumption, small enough not to overload the liver:  
17 approximately 5% of calories, or about 38 grams (9 teaspoons, 150 calories) per day for men,  
18 25 grams (6 teaspoons, 100 calories) per day for women, up to 25 grams (6 teaspoons, 100  
19 calories) for children between 8 and 18 years old, and 12 grams (3 teaspoons, 48 calories)  
20 for children 4 to 8 years old, which is the basis of the American Heart Association's  
21 foregoing recommendations for maximum daily added sugar intake.<sup>19</sup>

22 31. But the long-term consumption of excess sugar can have dire physiological  
23 consequences, acting as a chronic, dose-dependent liver toxin, overloading the liver and  
24 causing chronic metabolic disease, also sometimes called metabolic syndrome, a cluster of  
25

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26  
27 <sup>19</sup> AHA Scientific Statement, *supra* n.10; *see also* "How Much Is Too Much?," at  
28 <http://www.sugarscience.org/the-growing-concern-of-overconsumption>.

1 symptoms that, when present together, increase a person's risk of chronic disease like  
2 cardiovascular disease and type 2 diabetes.

3 32. When excess sugar consumption overloads the liver, the glucose increases  
4 insulin secretion, while the fructose gets turned into liver fat, causing insulin resistance. The  
5 combination over time results in rapid and dramatic increases in blood glucose and insulin  
6 concentrations.<sup>20</sup> Over time, individuals with frequent insulin secretion may develop insulin  
7 resistance, where the body produces insulin but does not use it effectively, so that glucose  
8 builds up in the blood instead of being absorbed by the cells. Because the muscle, fat, and  
9 liver cells do not respond properly to insulin and thus cannot easily absorb glucose from the  
10 bloodstream, the body needs higher levels of insulin. Eventually the pancreas' beta cells  
11 cannot keep up with this increasing demand, and over time can no longer produce enough  
12 insulin to overcome insulin resistance, so blood glucose levels remain high.

13 33. Currently, about two-thirds of the American population is overweight, about  
14 one-quarter to one-third is diabetic or pre-diabetic, and another one-quarter is hypertensive.  
15 Many Americans also have high serum triglycerides. Insulin resistance is a component of all  
16 of these health issues.

17 34. Energy deposition into fat cells by insulin stimulate them to secrete a hormone  
18 called leptin, which is a natural appetite suppressant that tells the brain the body is full and  
19 can stop eating. Generally, glucose suppresses the hunger hormone, ghrelin, and stimulates  
20 leptin. But high insulin levels brought on by excess sugar consumption have been linked to  
21 leptin resistance, where the brain is desensitized to the hormone and so no longer "hears" the  
22  
23

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24 <sup>20</sup> Janssens, J.P., et al., "Effects of soft drink and table beer consumption on insulin response  
25 in normal teenagers and carbohydrate drink in youngsters," *European Journal of Cancer*  
26 *Prevention*, Vol. 8, 289-95 (1999) ("In contrast to table beer, consumption of regular soft  
27 drinks induced a fast and dramatic increase in both glucose and insulin concentration within  
28 a maximum 1 hour after consumption.").



1 message to stop eating.<sup>21</sup> Because increased insulin makes the body feel hungry, excess sugar  
2 consumption can create a vicious cycle in which the more sugar one eats, the hungrier one  
3 feels.

#### 4 **B. The Body's Response to Fructose**

5 35. But it is the fructose, found in most processed foods, that appears to cause the  
6 greatest harm in the shortest amount of time. Nearly all added sugars contain significant  
7 amounts of fructose. For example, HFCS typically contains approximately 42% or 55%  
8 fructose, while table sugar and other sweeteners, like cane sugar, contain 50% fructose.

9 36. Fructose is the most lipophilic carbohydrate, meaning it easily converts to a  
10 form, glycerol, that supports conversion to fats, including free fatty acids, a damaging form  
11 of cholesterol called very low-density lipoprotein (VLDL), and triglycerides, which get  
12 stored as fat. Studies in humans and animals have shown that fructose is preferentially  
13 metabolized to lipid (fat) in the liver, leading to increased triglyceride levels, which are  
14 associated with insulin resistance and cardiovascular disease.<sup>22</sup> Fatty acids created during  
15 fructose metabolism accumulate as fat droplets in the liver, also causing insulin resistance,  
16 as well as non-alcoholic fatty liver disease. In addition, when the liver turns excess sugar  
17 into liver fat and becomes insulin resistant, that generates hyperinsulinemia, which drives  
18 energy storage into body fat.

19 37. Glucose does not do this. Following consumption of 120 calories of glucose,  
20 less than 1 calorie should be stored as fat, while 120 calories of fructose should result in 40  
21 calories being stored as fat.

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23 <sup>21</sup> Shapiro, A., et al., "Fructose-induced leptin resistance exacerbates weight gain in response  
24 to subsequent high-fat feeding," *American Journal of Physiology, Regulatory, Integrative  
25 and Comparative Physiology*, Vol. 295, No. 5, R1370-75 (2008).

26 <sup>22</sup> Elliot, S.S., et al., "Fructose, weight gain, and the insulin resistance syndrome," *American  
27 Journal of Clinical Nutrition*, Vol. 76, 911-22 (2002) [hereinafter, "Elliot, Fructose & Insulin  
28 Resistance"]; Bray, How Bad is Fructose?, *supra* n.4; Havel, Dietary Fructose, *supra* n.9.

38. The metabolism of fructose also creates several waste products and toxins, including uric acid, which drives up blood pressure, causes gout, and is a risk factor for cardiovascular disease because the production of uric acid utilizes nitric oxide, a key modulator of vascular function, and causes inflammation. Experimental human studies confirm that fructose feeding raises serum uric acid levels.<sup>23</sup>

39. Moreover, fructose interferes with the brain's communication with leptin, which may result in overeating. And while glucose suppresses ghrelin, thus reducing hunger, fructose has no effect on ghrelin.

### C. The Addiction Response

40. Research shows that, for some people, eating sugar produces characteristics of craving and withdrawal, along with chemical changes in the brain's reward center, the limbic region, which can be similar to those of people addicted to drugs like cocaine and alcohol.<sup>24</sup> These changes are linked to a heightened craving for more sugar.<sup>25</sup> This can create a vicious cycle leading to chronic illness.

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<sup>23</sup> Nguyen, S., et al., "Sugar Sweetened Beverages, Serum Uric Acid, and Blood Pressure in Adolescents," *Journal of Pediatrics*, Vol. 154, No. 6, 807-13 (June 2009) (citations omitted) [hereinafter, "Nguyen, Serum Uric Acid"]; Johnson, R.J., "Potential role of sugar (fructose) in the epidemic of hypertension, obesity and the metabolic syndrome, diabetes, kidney disease, and cardiovascular disease," *American Journal of Clinical Nutrition*, Vol. 86, 899-906 (2007); Nakagawa, T., et al., "A causal role for uric acid in fructose-induced metabolic syndrome," *American Journal of Physiology*, Vol. 290, F625-31 (2006).

<sup>24</sup> Volkow, N.D., et al., "Drug addiction: the neurobiology of behavior gone awry," *Nature Reviews Neuroscience*, Vol. 5, No. 12, 963-70 (2004); Brownell, K.D., et al., "Food and addiction: A comprehensive handbook," *Oxford University Press* (2012).

<sup>25</sup> Avena, N., "Evidence for sugar addiction: behavioral and neurochemical effects of intermittent, excessive sugar intake," *Neuroscience Behavior Review*, Vol. 32, No. 1, 20-39 (2008).



**III. There Has Been a Dramatic Rise in Obesity & Chronic Disease That Parallels the Rise in Human Sugar Consumption**

41. As noted above, there was a dramatic rise in Americans' use of sugar, first in the mid-18th century, then again starting in the United States in about 1970, with the introduction into the market of HFCS. Concurrently with these changes in the diet have been alarming rises in obesity and chronic disease.

42. In 1924, New York City health commissioner Haven Emerson noted a seven-fold increase in diabetes rates in the city. In 1931, Dr. Paul Dudley White, a cardiologist at Massachusetts General Hospital, warned of an epidemic of heart disease. And in 1988, scientists learned about the advent of adolescent type 2 diabetes.

43. In 2004, researchers reported their analysis of food consumption patterns from 1967 to 2000. Noting that HFCS consumption increased more than 1,000% from 1970 to 1990, "far exceeding the changes in intake of any other food or food group," researchers found this "mirrors the rapid increase in obesity" seen during the same period, as demonstrated in the below graphic.<sup>26</sup>

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<sup>26</sup> Bray, HFCS Role in Obesity Epidemic, *supra* n.5, at 537, 540-41 & Table 2; *see also* Flegal, K.M., et al., "Prevalence and trends in obesity among US adults, 1999-2000," *Journal of the American Medical Association*, Vol. 288, 1723-27 (2002); Putnam, J.J., et al., "Food consumption, prices and expenditures, 1970-97," *U.S. Department of Agriculture Economic Research Service statistical bulletin no. 695* (April 1999).

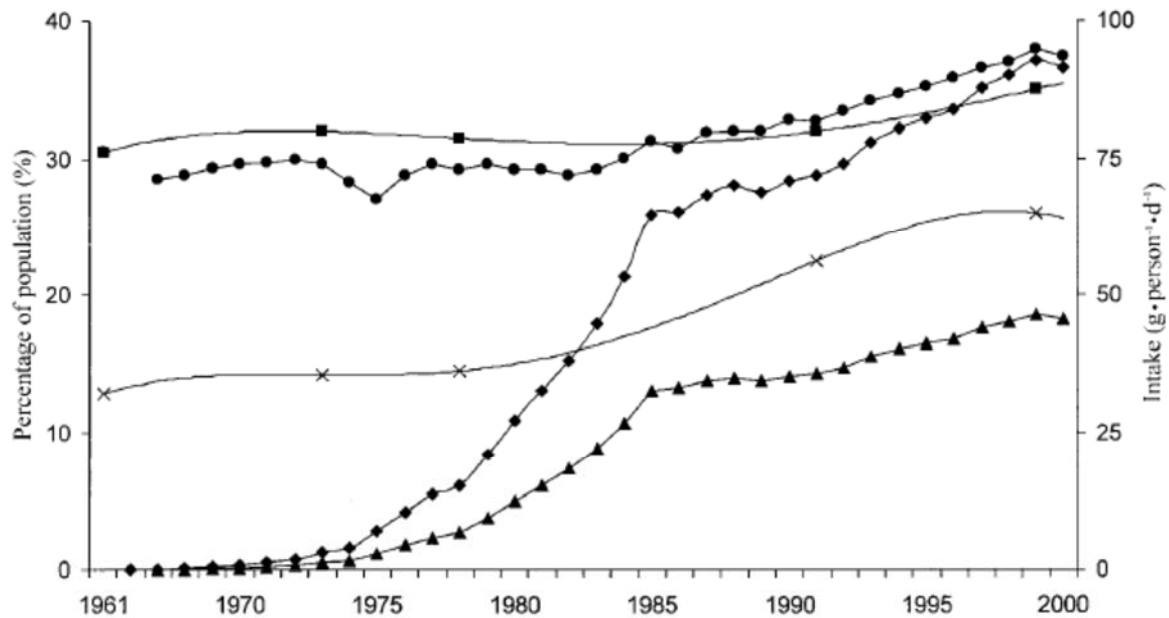


FIGURE 1. Estimated intakes of total fructose (●), free fructose (▲), and high-fructose corn syrup (HFCS, ◆) in relation to trends in the prevalence of overweight (■) and obesity (x) in the United States. Data from references 7 and 35.

44. Besides the compelling circumstantial evidence that increased sugar consumption has led to chronic disease, there is substantial research showing the causal mechanisms of disease and demonstrating substantial increased risk of chronic disease with excess sugar consumption.

#### IV. There is Substantial Scientific Evidence That Excess Sugar Consumption Causes Metabolic Syndrome, Cardiovascular Disease, Type 2 Diabetes, and Other Morbidity

45. Research shows that overloading the mitochondria—the energy-burning factories within the cells—in any given organ will manifest various forms of chronic metabolic disease. Whatever organ becomes insulin resistant manifests its own chronic metabolic disease. For example, insulin resistance of the liver leads to type 2 diabetes. Insulin resistance of the brain causes Alzheimer’s disease. Insulin resistance of the kidney leads to chronic renal disease.

46. After artificial trans fat, the chemical that best overloads mitochondria is sugar.

##### A. Excess Sugar Consumption Causes Metabolic Syndrome

47. Excess consumption of added sugar leads to metabolic syndrome by stressing and damaging crucial organs, including the pancreas and liver. When the pancreas, which

1 produces insulin, becomes overworked, it can fail to regulate blood sugar properly. Large  
 2 doses of fructose can overwhelm the liver, which metabolizes fructose. In the process, the  
 3 liver will convert excess fructose to fat, which is stored in the liver and released into the  
 4 bloodstream. This process contributes to key elements of metabolic syndrome, including  
 5 high blood fats and triglycerides, high cholesterol, high blood pressure, and extra body fat,  
 6 especially in the belly.<sup>27</sup>

7 48. Metabolic disease has been linked to type 2 diabetes, cardiovascular disease,  
 8 obesity, polycystic ovary syndrome, nonalcoholic fatty liver disease, and chronic kidney  
 9 disease, and is defined as the presence of any three of the following:

- 10 a. Large Waist Size (35" or more for women, 40" or more for men);
- 11 b. High triglycerides (150mg/dL or higher, or use of cholesterol  
 12 medication);
- 13 c. High total cholesterol, or HDL levels under 50mg/dL for women, and 40  
 14 mg for men;
- 15 d. High blood pressure (135/85 mm or higher); or
- 16 e. High blood sugar (100mg/dL or higher).

17 49. More generally, "metabolic abnormalities that are typical of the so-called  
 18 metabolic syndrome . . . includ[e] insulin resistance, impaired glucose tolerance, high  
 19 concentrations of circulating triacylglycerols, low concentrations of HDLs, and high  
 20 concentrations of small, dense LDLs."<sup>28</sup>

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23 <sup>27</sup> Te Morenga, L., et al., "Dietary sugars and body weight: systematic review and meta-  
 24 analyses of randomized controlled trials and cohort studies," *BJM* (January 2013)  
 25 [hereinafter, "Te Morenga, Dietary Sugars & Body Weight"].

26 <sup>28</sup> Fried, S.K., "Sugars, hypertriglyceridemia, and cardiovascular disease," *American Journal*  
 27 *of Clinical Nutrition*, Vol. 78 (suppl.), 873S-80S, at 873S (2003) [hereinafter, "Fried,  
 28 Hypertriglyceridemia"].

1        50. 56 million Americans have metabolic syndrome, or about 22.9% over the age  
2 of 20, placing them at higher risk for chronic disease.

3        51. In 2010, Harvard researchers published a meta-analysis of three studies,  
4 involving 19,431 participants, concerning the effect of consuming sugar-sweetened  
5 beverages on risk for metabolic syndrome. They found participants in the highest quantile  
6 of 1-2 servings per day<sup>29</sup> had an average 20% greater risk of developing metabolic syndrome  
7 than did those in the lowest quantile of less than 1 serving per day, showing “a clear link  
8 between SSB consumption and risk of metabolic syndrome . . . .”<sup>30</sup>

9        52. Researchers who studied the incidence of metabolic syndrome and its  
10 components in relation to soft drink consumption in more than 6,000 participants in the  
11 Framingham Heart Study found that individuals who consumed 1 or more soft drinks per  
12 day (i.e., 140-150 calories and 35-37.5 grams of sugar or more) had a 48% higher prevalence  
13 of metabolic syndrome than infrequent consumers, those who drank less than 1 soft drink  
14 per day. In addition, the frequent-consumer group had a 44% higher risk of developing  
15 metabolic syndrome.<sup>31</sup>

16        53. Recently, researchers concluded a study to determine whether the detrimental  
17 effects of dietary sugar were due to extremely high dosing, excess calories, or because of its  
18  
19

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20  
21 <sup>29</sup> Because 1 sugar-sweetened beverage typically has 140-150 calories and 35-37.5 grams of  
22 sugar per 12-ounce serving, this is equivalent to between 140 and 300 calories per day, and  
35 to 75 grams of sugar per day.

23 <sup>30</sup> Malik, Vasanti S., et al., “Sugar-Sweetened Beverages and Risk of Metabolic Syndrome  
24 and Type 2 Diabetes,” *Diabetes Care*, Vol. 33, No. 11, 2477-83, at 2477, 2480-81 (November  
25 2010) [hereinafter “Malik, 2010 Meta-Analysis”].

26 <sup>31</sup> Dhingra, R., et al., “Soft Drink Consumption and Risk of Developing Cardiometabolic Risk  
27 Factors and the Metabolic Syndrome in Middle-Aged Adults in the Community,”  
28 *Circulation*, Vol. 116, 480-88 (2007) [hereinafter “Dhingra, Cardiometabolic Risk”].

1 effects on weight gain, rather than caused by sugar consumption directly.<sup>32</sup> In other words,  
2 the researchers dissociated the metabolic effects of dietary sugar from its calories and effects  
3 on weight gain.

4 54. Because the researchers did not want to give subjects sugar to see if they got  
5 sick, they instead took sugar away from people who were already sick to see if they got well.  
6 But if subjects lost weight, critics would argue that the drop in calories or weight loss was  
7 the reason for the clinical improvement. Therefore, the researchers designed the study to be  
8 isocaloric, by giving back to subjects the same number of calories in starch that were taken  
9 away in sugar. The study involved 43 children, ages 8 to 19, each obese with at least one  
10 other co-morbidity demonstrating metabolic problems. All were high consumers of added  
11 sugar in their diets.<sup>33</sup>

12 55. To perform the study, researchers assessed subjects' home diets by two  
13 questionnaires to determine how many calories, and how much fat, protein, and carbohydrate  
14 they were eating. Subjects were then tested at a hospital based on their home diets. Then, for  
15 the next 9 days, researchers catered the subjects' meals. The macronutrient percentages of  
16 fat, protein, and carbohydrate were not changed. Subjects were fed the same calories and  
17 percent of each macronutrient as their home diet; but within the carbohydrate fraction,  
18 researchers took the added sugar out, and substituted starch. For example, researchers took  
19 pastries out, and put bagels in; took yogurt out, and put baked potato chips in; took chicken  
20 teriyaki out, and put turkey hot dogs in (although subjects were still given whole fruit).  
21 Researchers reduced subjects' dietary sugar consumption from 28% to 10% of calories.  
22 Researchers also gave subjects a scale to take home, and each day they would weigh  
23

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24 <sup>32</sup> Robert H. Lustig, et al., "Isocaloric Fructose Restriction and Metabolic Improvement in  
25 Children with Obesity and Metabolic Syndrome," *Pediatric Obesity*, Vol. 24, No. 2, 453-60  
26 (Feb. 2016).

27 <sup>33</sup> *See id.* at 453-54.  
28

1 themselves. If they were losing weight, they were instructed to eat more. The goal was for  
 2 subjects to remain weight-stable over the 10 days of study. On the final day, subjects came  
 3 back to the hospital for testing on their experimental low-added sugar diet. The study team  
 4 analyzed the pre- and post-data in a blinded fashion so as not to introduce bias.<sup>34</sup>

5 56. Researchers analyzed three types of data. First, diastolic blood pressure  
 6 decreased by 5 points. Second, baseline blood levels of analytes associated with metabolic  
 7 disease, such as lipids, liver function tests, and lactate (a measure of metabolic performance)  
 8 all improved significantly. Third, fasting glucose decreased by 5 points. Glucose tolerance  
 9 improved markedly, and fasting insulin levels fell by 50%. Each of these results was highly-  
 10 statistically-significant.<sup>35</sup>

11 57. In sum, the study indicated that subjects improved their metabolic status in just  
 12 10 days, even while eating processed food, by just removing added sugar and substituting  
 13 starch. The metabolic improvement, moreover, was unrelated to changes in weight or body  
 14 fat.

## 15 **B. Excess Sugar Consumption Causes Type 2 Diabetes**

16 58. Diabetes affects 25.8 million Americans, and can cause kidney failure, lower-  
 17 limb amputation, and blindness. In addition, diabetes doubles the risk of colon and pancreatic  
 18 cancers and is strongly associated with coronary artery disease and Alzheimer's disease.<sup>36</sup>

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21 <sup>34</sup> See *id.* at 454-55.

22 <sup>35</sup> See *id.* at 455-56.

23 <sup>36</sup> Aranceta Bartrina, J. et al., "Association between sucrose intake and cancer: a review of  
 24 the evidence," *Nutrición Hospitalaria*, Vol. 28 (Suppl. 4), 95-105 (2013); Garcia-Jimenez,  
 25 C., "A new link between diabetes and cancer: enhanced WNT/beta-catenin signaling by high  
 26 glucose," *Journal of Molecular Endocrinology*, Vol. 52, No. 1 (2014); Linden, G.J., "All-  
 27 cause mortality and periodontitis in 60-70-year-old men: a prospective cohort study," *Journal*  
 28 *of Clinical Periodontal*, Vol. 39, No. 1, 940-46 (October 2012).

1        59. In 2010, Harvard researchers also performed a meta-analysis of 8 studies  
2 concerning sugar-sweetened beverage consumption and risk of type 2 diabetes, involving a  
3 total of 310,819 participants. They concluded that individuals in the highest quantile of SSB  
4 intake had an average 26% greater risk of developing type 2 diabetes than those in the lowest  
5 quantile.<sup>37</sup> Moreover, “larger studies with longer durations of follow-up tended to show  
6 stronger associations.”<sup>38</sup> Thus, the meta-analysis showed “a clear link between SSB  
7 consumption and risk of . . . type 2 diabetes.”<sup>39</sup>

8        60. An analysis of data for more than 50,000 women from the Nurses’ Health  
9 Study,<sup>40</sup> during two 4-year periods (1991-1995, and 1995-1999), showed, after adjusting for  
10 confounding factors, that women who consumed 1 or more sugar-sweetened soft drink per  
11 day (*i.e.*, 140-150 calories and 35-37.5 grams of sugar), had an 83% greater relative risk of  
12 type 2 diabetes compared with those who consumed less than 1 such beverage per month,  
13 and women who consumed 1 or more fruit punch drinks per day had a 100% greater relative  
14 risk of type 2 diabetes.<sup>41</sup>

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16 <sup>37</sup> Malik, 2010 Meta-Analysis, *supra* n.30 at 2477, 2480.

17 <sup>38</sup> *Id.* at 2481.

18 <sup>39</sup> *Id.*

19 <sup>40</sup> The Nurses’ Health Study was established at Harvard in 1976, and the Nurses’ Health Study  
20 II, in 1989. Both are long-term epidemiological studies conducted on women’s health. The  
21 study followed 121,700 women registered nurses since 1976, and 116,000 female nurses  
22 since 1989, to assess risk factors for cancer, diabetes, and cardiovascular disease. The Nurses’  
23 Health Studies are among the largest investigations into risk factors for major chronic disease  
24 in women ever conducted. *See generally* “The Nurses’ Health Study,” at  
<http://www.channing.harvard.edu/nhs>.

25 <sup>41</sup> Schulze, M.B., et al., “Sugar-Sweetened Beverages, Weight Gain, and Incidence of Type  
26 2 Diabetes in Young and Middle-Aged Women,” *Journal of the American Medical*  
27 *Association*, Vol. 292, No. 8, 927-34 (Aug. 25, 2004) [hereinafter “Schulze, Diabetes in  
28 Young & Middle-Aged Women”].



61. The result of this analysis shows a statistically significant linear trend with increasing sugar consumption.<sup>42</sup>

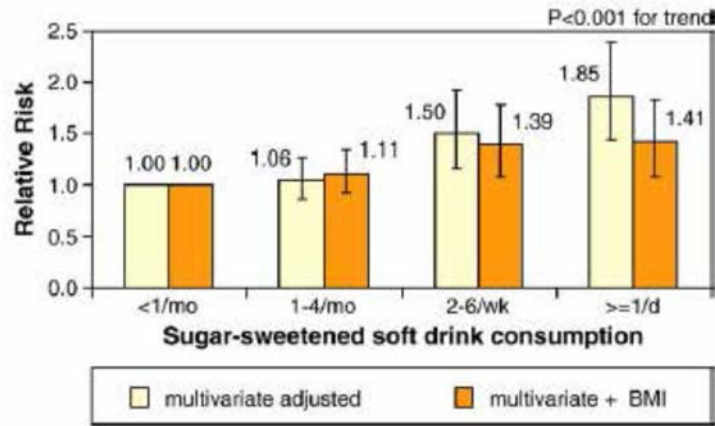


Fig. 4. Multivariate relative risks (RRs) of type 2 diabetes according to sugar-sweetened soft drink consumption in the Nurses' Health Study II 1991-1999 (Multivariate RRs were adjusted for age, alcohol (0, 0.1-4.9, 5.0-9.9, 10+ g/d), physical activity (quintiles), family history of diabetes, smoking (never, past, current), postmenopausal hormone use (never, ever), oral contraceptive use (never, past, current), intake (quintiles) of cereal fiber, magnesium, trans fat, polyunsaturated:saturated fat, and consumption of sugar-sweetened soft drinks, diet soft drinks, fruit juice, and fruit punch (other than the main exposure, depending on model). The data were based on Ref. [50]).

62. A prospective cohort study of more than 43,000 African American women between 1995 and 2001 showed that the incidence of type 2 diabetes was higher with higher intake of both sugar-sweetened soft drinks and fruit drinks. After adjusting for confounding variables, those who drank 2 or more soft drinks per day (*i.e.*, 140-300 calories and 35-75 grams of sugar) showed a 24% greater risk of type 2 diabetes, and those who drank 2 or more fruit drinks per day showed a 31% greater risk of type 2 diabetes, than those who drank 1 or less such drinks per month.<sup>43</sup>

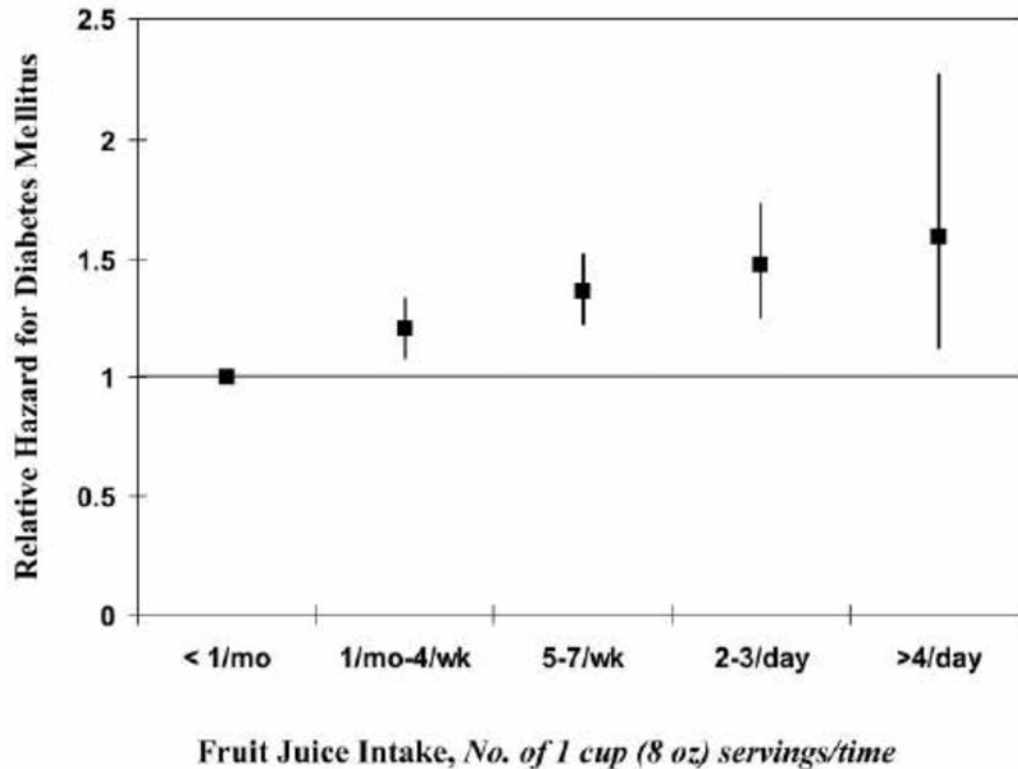
63. A large cohort study of more than 70,000 women from the Nurses' Health Study followed for 18 years showed that those who consumed 2 to 3 apple, grapefruit, and orange

<sup>42</sup> Hu, F.B., et al., "Sugar-sweetened beverages and risk of obesity and type 2 diabetes: Epidemiologic evidence," *Physiology & Behavior*, Vol. 100, 47-54 (2010).

<sup>43</sup> Palmer, J.R., et al., "Sugar-Sweetened Beverages and Incidence of Type 2 Diabetes Mellitus in African American Women," *Archive of internal Medicine*, Vol. 168, No. 14, 1487-82 (July 28, 2008) [hereinafter "Palmer, Diabetes in African American Women"].



juices per day (280-450 calories and 75-112.5 grams of sugar) had an 18% greater risk of type 2 diabetes than women who consumed less than 1 sugar-sweetened beverage per month. The data also showed a linear trend with increased consumption, as demonstrated below.<sup>44</sup>



**Figure 1**—Multivariate-adjusted relative hazard of diabetes by category of cumulatively updated fruit juice intake. Values were adjusted for cumulatively updated BMI, physical activity, family history of diabetes, postmenopausal hormone use, alcohol use, smoking, and total energy intake. For an increase of 1 serving/day of fruit juice, the multivariate-adjusted relative risk was 1.18 (95% CI 1.10–1.26;  $P < 0.0001$ ).

64. An analysis of more than 40,000 men from the Health Professionals Follow-Up Study, a prospective cohort study conducted over a 20-year period, found that, after adjusting for age and a wide variety of other confounders, those in the top quartile of sugar-sweetened beverage intake had a 24% greater risk of type 2 diabetes than those in the bottom quartile,

<sup>44</sup> Bazzano, L.A., et al., "Intake of fruit, vegetables, and fruit juices and risk of diabetes in women," *Diabetes Care*, Vol. 31, 1311-17 (2008).

1 while consumption of artificially-sweetened beverages, after adjustment, showed no  
2 association.<sup>45</sup>

3 65. Most convincingly, an econometric analysis of repeated cross-sectional data  
4 published in 2013 established a causal relationship between sugar availability and type 2  
5 diabetes. After adjusting for a wide range of confounding factors, researchers found that an  
6 increase of 150 calories per day related to an insignificant 0.1% rise in diabetes prevalence  
7 by country, while an increase of 150 calories per day in sugar related to a 1.1% rise in  
8 diabetes prevalence by country, a statically-significant 11-fold difference.<sup>46</sup>

### 9 **C. Excess Sugar Consumption Causes Cardiovascular Disease**

10 66. Sixteen million Americans have heart disease, which is the number one killer  
11 in the United States.<sup>47</sup>

12 67. Data obtained from NHANES surveys during the periods of 1988-1994, 1999-  
13 2004, and 2005-2010, after adjusting for a wide variety of other factors, demonstrate that  
14 those who consumed between 10% - 24.9% of their calories from added sugars had a 30%  
15 greater risk of cardiovascular disease (CVD) mortality than those who consumed 5% or less  
16 of their calories from added sugar. In addition, those who consumed 25% or more of their  
17 calories from added sugars had an average 275% greater risk of CVD mortality than those  
18 who consumed less than 5% of calories from added sugar.<sup>48</sup>

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20 <sup>45</sup> de Konig, L., et al., “Sugar-sweetened and artificially sweetened beverage consumption  
21 and risk of type 2 diabetes in men,” *American Journal of Clinical Nutrition*, Vol. 93, 1321-  
22 27 (2011).

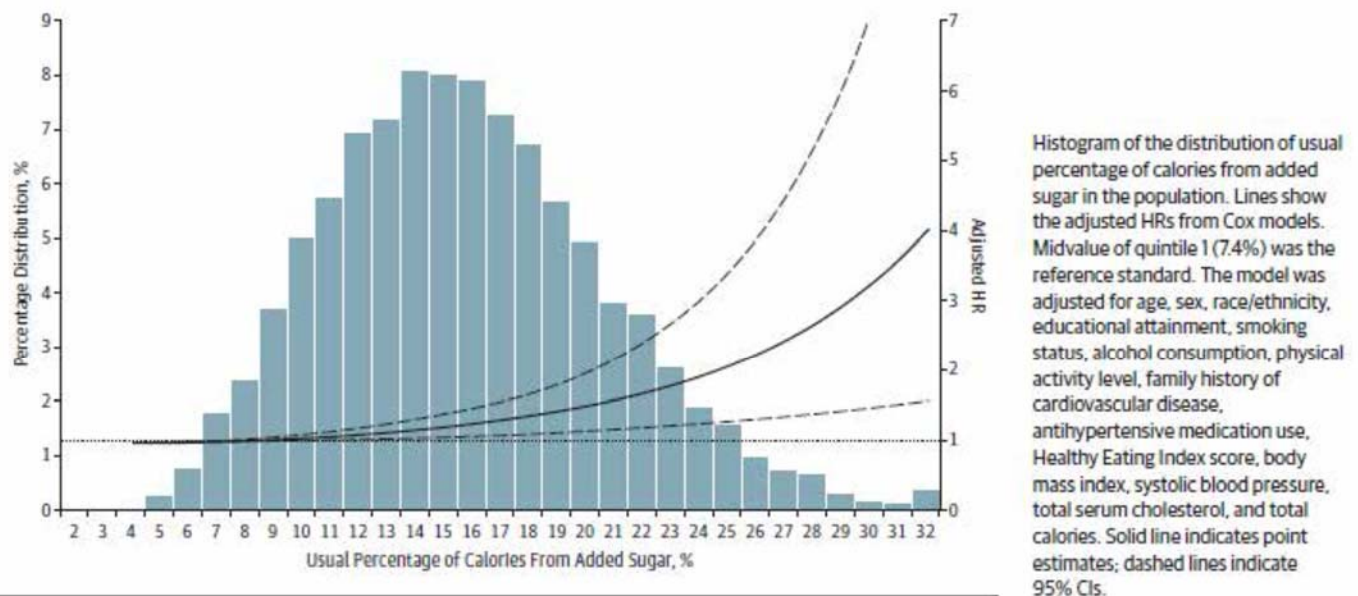
23 <sup>46</sup> Basu, S., et al., “The Relationship of Sugar to Population-Level Diabetes Prevalence: An  
24 Econometric Analysis of Repeated Cross-Sectional Data,” *PLOS Online*, Vol. 8, Issue 2  
(February 27, 2013).

25 <sup>47</sup> Gaddam, K.K., et al., “Metabolic syndrome and heart failure—the risk, paradox, and  
26 treatment,” *Current Hypertension Reports*, Vol. 13, No. 2, 142-48 (2011).

27 <sup>48</sup> Yang, NHANES Analysis, *supra* n.12 at E4-5.

68. Similarly, when compared to those who consumed approximately 8% of calories from added sugar, participants who consumed approximately 17% - 21% (the 4th quintile) of calories from added sugar had a 38% higher risk of CVD mortality, while the relative risk was more than double for those who consumed 21% or more of calories from added sugar (the 5th quintile). Thus, “[t]he risk of CVD mortality increased exponentially with increasing usual percentage of calories from added sugar,”<sup>49</sup> as demonstrated in the chart below.

Figure 1. Adjusted Hazard Ratio (HR) of the Usual Percentage of Calories From Added Sugar for Cardiovascular Disease Mortality Among US Adults 20 Years or Older: National Health and Nutrition Examination Survey Linked Mortality Files, 1988-2006



69. The NHANES analysis also found “a significant association between sugar-sweetened beverage consumption and risk of CVD mortality,” with an average 29% greater risk of CVD mortality “when comparing participants who consumed 7 or more servings/wk (360 mL per serving) with those who consumed 1 serving/wk or less . . . .”<sup>50</sup> The study concluded that “most US adults consume more added sugar than is recommended for a

<sup>49</sup> *Id.*

<sup>50</sup> *Id.* at E6.

1 healthy diet. A higher percentage of calories from added sugar is associated with  
2 significantly increased risk of CVD mortality. In addition, regular consumption of sugar-  
3 sweetened beverages is associated with elevated CVD mortality.”<sup>51</sup>

4 70. The Nurses’ Health Study found that, after adjusting for other unhealthy  
5 lifestyle factors, those who consumed two or more sugar-sweetened beverages per day (280  
6 calories and 70 grams of sugar or more) had a 35% greater risk of coronary heart disease  
7 compared with infrequent consumers.<sup>52</sup>

8 **D. Excess Sugar Consumption Causes Liver Disease**

9 71. Fructose consumption causes serious liver disease, including non-alcoholic  
10 fatty liver disease (NAFLD), characterized by excess fat build-up in the liver. Five percent  
11 of these cases develop into non-alcoholic steatohepatitis (NASH), scarring as the liver tries  
12 to heal its injuries, which gradually cuts off vital blood flow to the liver. About 25% of  
13 NASH patients progress to non-alcoholic liver cirrhosis, which requires a liver transplant or  
14 can lead to death.<sup>53</sup>

15 72. Since 1980, the incidence of NAFLD and NASH has doubled, along with the  
16 rise of fructose consumption, with approximately 6 million Americans estimated to have  
17  
18  
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22 <sup>51</sup> *Id.* at E8.

23 <sup>52</sup> Fung T.T., et al., “Sweetened beverage consumption and risk of coronary heart disease in  
24 women,” *American Journal of Clinical Nutrition*, Vol. 89 at 1037-42 (February 2009).

25 <sup>53</sup> Farrell, G.C., et al., “Nonalcoholic fatty liver disease: from steatosis to cirrhosis,”  
26 *Hepatology*, Vol. 433, No. 2 (Suppl. 1), S99-S112 (February 2006); Powell, E.E., et al., “The  
27 Natural History of Nonalcoholic Steatohepatitis: A Follow-up Study of Forty-two Patients  
28 for Up to 21 Years,” *Hepatology*, Vol. 11, No. 1 (1990).

1 progressed to NASH and 600,000 to Nash-related cirrhosis. Most people with NASH also  
 2 have type 2 diabetes. NASH is now the third-leading reason for liver transplant in America.<sup>54</sup>

3 73. Moreover, because the liver metabolizes sugar virtually identically to alcohol,  
 4 the U.S. is now seeing for the first time alcohol-related diseases in children. Conservative  
 5 estimates are that 31% of American adults, and 13% of American children suffer from  
 6 NAFLD.<sup>55</sup>

### 7 **E. Excess Sugar Consumption Causes Obesity**

8 74. Excess sugar consumption also leads to weight gain and obesity because insulin  
 9 secreted in response to sugar intake instructs the cells to store excess energy as fat. This  
 10 excess weight can then exacerbate the problems of excess sugar consumption, because  
 11 excess fat, particularly around the waist, is in itself a primary cause of insulin resistance,  
 12 another vicious cycle. Studies have shown that belly fat produces hormones and other  
 13 substances that can cause insulin resistance, high blood pressure, abnormal cholesterol  
 14 levels, and cardiovascular disease. And belly fat plays a part in the development of chronic  
 15 inflammation in the body, which can cause damage over time without any signs or  
 16 symptoms. Complex interactions in fat tissue draw immune cells to the area, which triggers  
 17 low-level chronic inflammation. This in turn contributes even more to insulin resistance,  
 18 type 2 diabetes, and cardiovascular disease.

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20 <sup>54</sup> Charlton, M.R., et al., “Frequency and outcomes of liver transplantation for nonalcoholic  
 21 steatohepatitis in the United States,” *Gastroenterology*, Vol. 141, No. 4, 1249-53 (October  
 22 2011).

23 <sup>55</sup> Lindback, S.M., et al., “Pediatric Nonalcoholic Fatty Liver Disease: A Comprehensive  
 24 Review,” *Advances in Pediatrics*, Vol. 57, No. 1, 85-140 (2010); Lazo, M. et al., “The  
 25 Epidemiology of Nonalcoholic Fatty Liver Disease: A Global Perspective,” *Seminars in Liver*  
 26 *Disease*, Vol. 28, No. 4, 339-50 (2008); Schwimmer, J.B., et al., “Prevalence of Fatty Liver  
 27 in Children and Adolescents,” *Pediatrics*, Vol. 118, No. 4, 1388-93 (2006); Browning, J.D.,  
 28 et al., “Prevalence of hepatic steatosis in an urban population in the United States: Impact of  
 ethnicity,” *Hepatology*, Vol. 40, No. 6, 1387-95 (2004).

1        75. Based on a meta-analysis of 30 studies between 1966 and 2005, Harvard  
2 researchers found “strong evidence for the independent role of the intake of sugar-sweetened  
3 beverages, particularly soda, in the promotion of weight gain and obesity in children and  
4 adolescents. Findings from prospective cohort studies conducted in adults, taken in  
5 conjunction with results from short-term feeding trials, also support a positive association  
6 between soda consumption and weight gain, obesity, or both.”<sup>56</sup>

7        76. A recent meta-analysis by Harvard researchers evaluating change in Body Mass  
8 Index per increase in 1 serving of sugar-sweetened beverages per day found a significant  
9 positive association between beverage intake and weight gain.<sup>57</sup>

10        77. One study of more than 2,000 2.5-year-old children followed for 3 years found  
11 that those who regularly consumed sugar-sweetened beverages between meals had a 240%  
12 better chance of being overweight than non-consumers.<sup>58</sup>

13        78. An analysis of data for more than 50,000 women from the Nurses’ Health Study  
14 during two 4-year periods showed that weight gain over a 4-year period was highest among  
15 women who increased their sugar-sweetened beverage consumption from 1 or fewer drinks  
16 per week, to 1 or more drinks per day (8.0 kg gain during the 2 periods), and smallest among  
17 women who decreased their consumption or maintained a low intake level (2.8 kg gain).<sup>59</sup>

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20        <sup>56</sup> Malik, V.S., et al., “Intake of sugar-sweetened beverages and weight gain: a systematic  
21 review,” *American Journal of Clinical Nutrition*, Vol. 84, 274-88 (2006).

22        <sup>57</sup> Malik, V.S., et al., “Sugar-sweetened beverages and BMI in children and adolescents:  
23 reanalyses of a meta-analysis,” *American Journal of Clinical Nutrition*, Vol. 29, 438-39  
24 (2009).

25        <sup>58</sup> Dubois, L., et al., “Regular sugar-sweetened beverage consumption between meals  
26 increases risk of overweight among preschool-aged children,” *Journal of the American  
Dietetic Association*, Vol. 107, Issue 6, 924-34 (2007).

27        <sup>59</sup> Schulze, Diabetes in Young & Middle-Aged Women, *supra* n.41.



79. A study of more than 40,000 African American women over 10 years had similar results. After adjusting for confounding factors, those who increased sugar-sweetened beverage intake from less than 1 serving per week, to more than 1 serving per day, gained the most weight (6.8 kg), while women who decreased their intake gained the least (4.1 kg).<sup>60</sup>

80. A study of more than 6,000 participants in the Framingham Heart Study found those who consumed more than 1 soft drink per day had a 31% greater risk of obesity than those who consumed less than 1 soft drink per day.<sup>61</sup>

81. The link between sugar intake and weight gain was also demonstrated in a randomized, controlled intervention study, where “[a] simple 12 month school based intervention focused on reducing consumption of carbonated drinks resulted in significant differences in the proportion of overweight children in the control and intervention groups,” as demonstrated in the chart below.

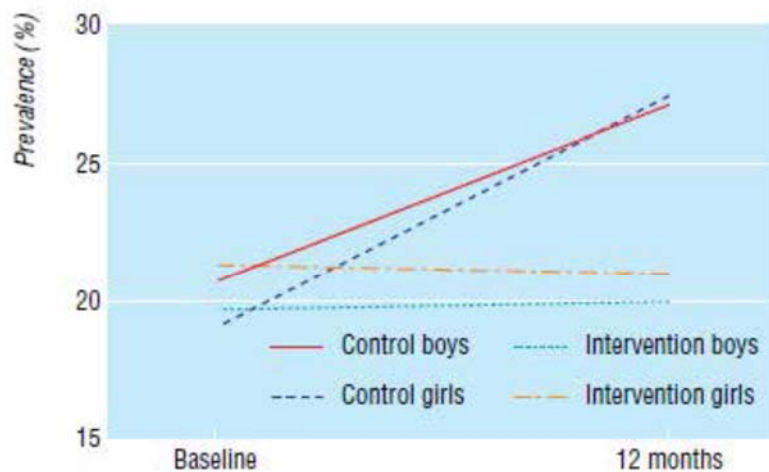


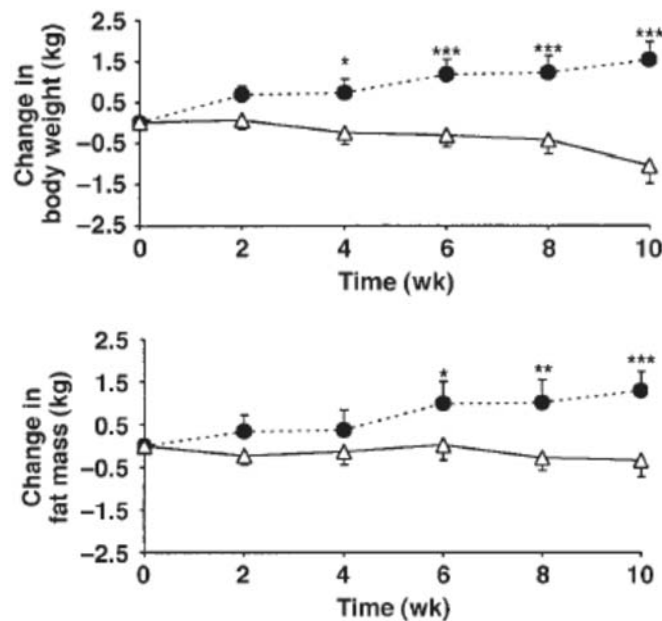
Fig 2 Mean change in prevalence of overweight and obese children from baseline to follow up at 12 months according to clusters

<sup>60</sup> Palmer, Diabetes in African American Women, *supra* n.43.

<sup>61</sup> Dhingra, Cardiometabolic Risk, *supra* n.31.

At a three-year follow-up, however, the significant difference seen between the groups after a year of focused education was no longer evident, with overweight children more prevalent in both groups, providing further support for the link between sugar and weight gain.<sup>62</sup>

82. Similarly, experimental short-term feeding studies comparing sugar-sweetened beverages to artificially-sweetened beverages have illustrated that consumption of the former leads to greater weight gain. As demonstrated in the chart below, one 10-week trial involving more than 40 men and women demonstrated that the group that consumed daily supplements of sucrose (for 28% of total energy) increased body weight and fat mass, by 1.6 kg for men and 1.3 kg for women, while the group that was supplemented with artificial sweeteners lost weight—1.0 kg for men and 0.3 kg for women.<sup>63</sup>



<sup>62</sup> James, J. et al., “Preventing childhood obesity: two year follow-up results from the Christchurch obesity prevention programme in schools (CHOPPS),” *BJM*, Vol. 335, 762 (2007) (discussing James, J., et al., “Preventing childhood obesity by reducing consumption of carbonated drinks: cluster randomized controlled trial,” *BJM*, Vol. 328, 1237 (April 27, 2004)).

<sup>63</sup> Raben, A., et al., “Sucrose compared with artificial sweeteners: different effects on ad libitum food intake and body weight after 10 wk of supplementation in overweight subjects,” *American Journal of Clinical Nutrition*, Vol. 76, 721-29 (2002) [hereinafter, “Raben, Sucrose vs. Artificial Sweeteners”].



**FIGURE 2.** Mean ( $\pm$  SEM) changes in body weight, fat mass, and fat-free mass during an intervention in which overweight subjects consumed supplements containing either sucrose (●;  $n = 21$ ) or artificial sweeteners ( $\Delta$ ;  $n = 20$ ) daily for 10 wk. The diet  $\times$  time interactions were significant for changes in body weight ( $P < 0.0001$ ) and fat mass ( $P < 0.05$ ) by analysis of variance with Tukey's post hoc tests. At specific time points for changes in body weight and fat mass, there were significant differences between the sucrose and sweetener groups: \* $P < 0.05$ , \*\* $P < 0.001$ , and \*\*\* $P < 0.0001$  (general linear model with least squares means and adjustment for multiple comparisons).

83. In another, 3-week study, researchers gave normal-weight subjects 1150 grams of soda per day, sweetened with either aspartame or HFCS. The experiment found that drinking artificially-sweetened soda reduced calorie intake and body weight of men, while drinking HFCS-sweetened soda significantly increased calorie intake and body weight of both sexes, as demonstrated in the chart below.<sup>64</sup>

<sup>64</sup> Tordoff, M.G., et al., "Effect of drinking soda sweetened with aspartame or high-fructose corn syrup on food intake and body weight," *American Journal of Clinical Nutrition*, Vol. 51, 963-69 (1990).

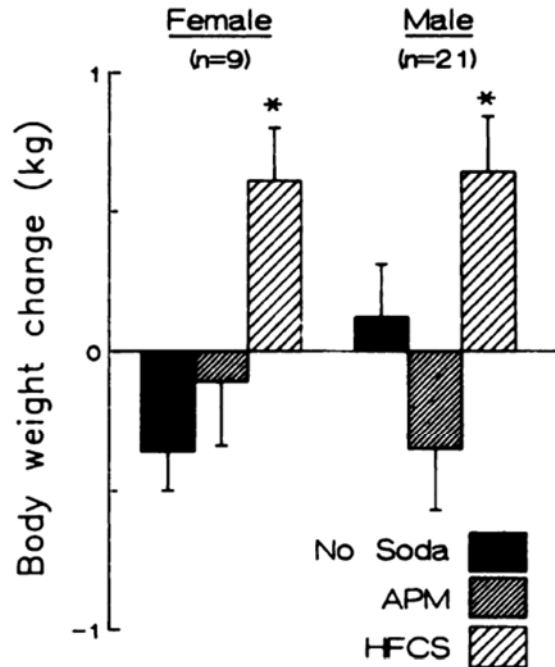


FIG 1. Changes in body weight during 3-wk periods when subjects drank 1150 g/d of soda sweetened with aspartame (APM), an equal weight of soda sweetened with high-fructose corn syrup (HFCS), or had no experimental manipulation (no soda). \* $p < 0.05$  relative to weight gain in no-soda period.

## F. Excess Sugar Consumption Causes Inflammation

84. Inflammation has been associated with type 2 diabetes, myocardial infarction, and stroke, as well as weight gain and obesity.<sup>65</sup>

85. A 10-week study comparing a group whose sucrose intake was increased by 151% to a group whose intake was decreased by 42% showed the former's blood concentration of the biological markers for inflammation, haptoglobin, transferrin, and C-

<sup>65</sup> Sorensen, L.B., et al., "Effect of sucrose on inflammatory markers in overweight humans," *American Journal of Clinical Nutrition*, Vol. 82, 421-27 (2005) (citations omitted) [hereinafter, "Sorensen, Inflammatory Markers"]; see also Pearson, T.A., et al., "Markers of Inflammation and Cardiovascular Disease: Application to Clinical and Public Health Practice, A Statement for Healthcare Professionals From the Centers for Disease Control and Prevention and the American Heart Association," *Circulation*, Vol. 107, 499-511 (2003).

1 reactive protein, increased by 13%, 5%, and 6%, respectively, while the latter group's  
2 concentrations decreased by 16%, 2%, and 26% respectively.<sup>66</sup>

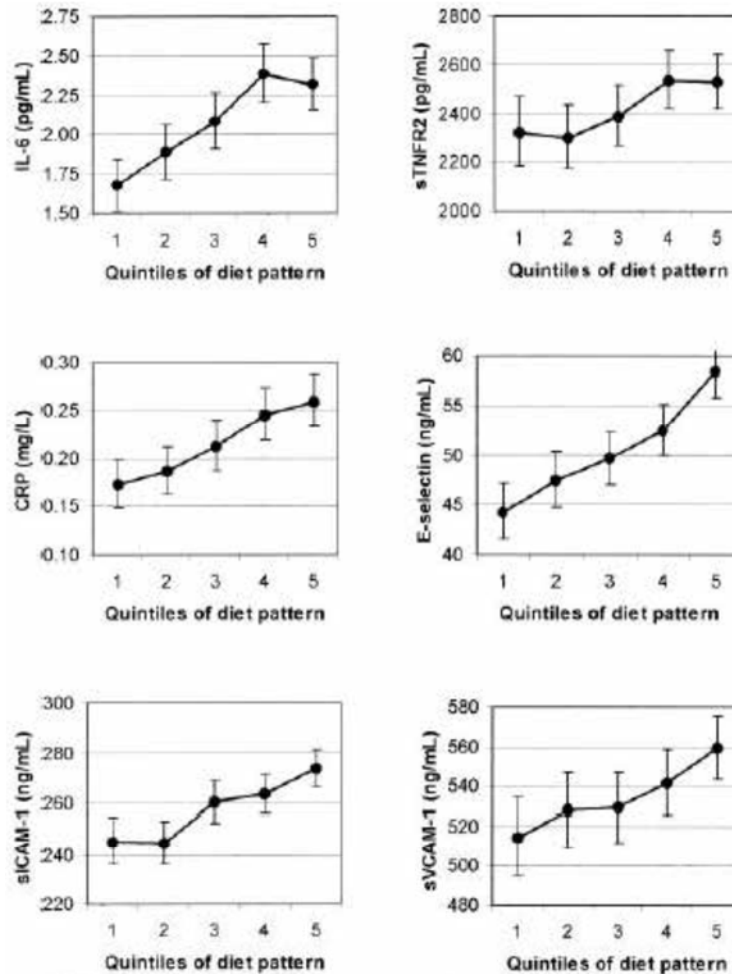
3 86. In a prospective, randomized, controlled crossover trial, 29 subjects were  
4 studied over six 3-week interventions in which they either consumed various amounts of  
5 fructose, glucose, or sucrose, or received dietary advice to consume low amounts of fructose.  
6 The study showed LDL particle size reducing (associated with atherosclerosis) by 0.51 nm  
7 after high-fructose intake (80 grams per day), and by 0.43 nm after high-sucrose intake (also  
8 80 grams per day). It also found significant increases in fasting glucose and C-reactive  
9 protein, leading the authors to conclude that the "data show potentially harmful effects of  
10 low to moderate consumption of SSBs on markers of cardiovascular risk such as LDL  
11 particles, fasting glucose, and [C-reactive protein] within just 3 wk in healthy young men,  
12 which is of particular significance for young consumers."<sup>67</sup>

13 87. In a nested case-control study of 656 cases of type 2 diabetes and 694 controls  
14 from the Nurses Study, researchers identified a dietary pattern strongly related to  
15 inflammatory markers, which was high in sugar-sweetened soft drinks, showing linear trends  
16 across quintiles of dietary pattern for six inflammation markers.

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25 <sup>66</sup> Sorensen, Inflammatory Markers, *supra* n.65.

26 <sup>67</sup> Aeberli, I., et al., "Low to moderate sugar-sweetened beverage consumption impairs  
27 glucose and lipid metabolism and promotes inflammation in healthy young men: a  
28 randomized controlled trial," *American Journal of Clinical Nutrition*, Vol. 94, 479-85 (2011).



**FIGURE 1.** Geometric mean concentrations and 95% CIs of interleukin 6 (IL-6), soluble tumor necrosis factor  $\alpha$  receptor 2 (sTNFR2), C-reactive protein (CRP), E-selectin, soluble intracellular cell adhesion molecule 1 (sICAM-1), and soluble vascular cell adhesion molecule 1 (sVCAM-1) by quintiles of diet pattern score adjusted for age, BMI (9 categories), physical activity (quintiles), family history of diabetes, smoking (never, past, current, or missing), postmenopausal hormone use (never, ever, or missing), energy intake (quintiles), and fasting status. The comparison between quintile 5 and quintile 1 was significant for all biomarkers,  $P < 0.05$ . Quintile cutoffs were based on distributions in controls.

## G. Excess Sugar Consumption Causes High Blood Triglycerides and Abnormal Cholesterol Levels

88. Fructose facilitates the biochemical formation of triacylglycerols more efficiently than does glucose.<sup>68</sup> This is because fructose metabolism in the liver converts the fructose to fructose-1-phosphate, which readily becomes a substrate for the backbone of the

<sup>68</sup> Elliot, Fructose & Insulin Resistance, *supra* n.22.

1 triglyceride molecule.<sup>69</sup> As compared to starches, sugars—particularly sucrose and  
2 fructose—tend to increase serum triacylglycerol concentrations by about 60%.<sup>70</sup>

3 89. Cholesterol is a waxy, fat-like substance found in the body’s cells, used to make  
4 hormones, bile acids, vitamin D, and other substances. The human body manufactures all  
5 the cholesterol it requires, which circulates in the bloodstream in packages called  
6 lipoproteins. Excess cholesterol in the bloodstream can become trapped in artery walls,  
7 building into plaque and narrowing blood vessels, making them less flexible, a condition  
8 called atherosclerosis. When this happens in the coronary arteries, it restricts oxygen and  
9 nutrients to the heart, causing chest pain or angina. When cholesterol-rich plaques in these  
10 arteries burst, a clot can form, blocking blood flow and causing a heart attack.

11 90. Most blood cholesterol is low-density lipoprotein, or LDL cholesterol, which is  
12 sometimes called “bad” cholesterol because it carries cholesterol to the body’s tissues and  
13 arteries, increasing the risk of heart disease. High-density lipoprotein, or HDL cholesterol,  
14 is sometimes called “good” cholesterol because it removes excess cholesterol from the  
15 cardiovascular system, bringing it to the liver for removal. Thus, a low level of HDL  
16 cholesterol increases the risk of heart disease.

17 91. Diet affects blood cholesterol. For example, the body reacts to saturated fat by  
18 producing LDL cholesterol.

19 92. When the liver is overwhelmed by large doses of fructose, it will convert excess  
20 to fat, which is stored in the liver and then released into the bloodstream, contributing to key  
21 elements of metabolic syndrome, like high blood fat and triglycerides, high total cholesterol,  
22 and low HDL “good” cholesterol.<sup>71</sup>

23  
24 <sup>69</sup> Bray, G.A., “Soft Drinks and Obesity: The Evidence,” *CMR e-Journal*, Vol. 2, Issue, 2,  
25 10-14, at 13 (Oct. 2009).

26 <sup>70</sup> Fried, Hypertriglyceridemia, *supra* n.28, at 873S.

27 <sup>71</sup> Te Morenga, Dietary Sugars & Body Weight, *supra* n.27.

1        93. A study of more than 6,000 participants in the Framingham Heart Study found  
 2 those who consumed more than 1 soft drink per day had a 25% greater risk of  
 3 hypertriglyceridemia, and 32% greater risk of low HDL cholesterol than those who  
 4 consumed less than 1 soft drink per day.<sup>72</sup>

5        94. A systematic review and meta-analysis of 37 randomized controlled trials  
 6 concerning the link between sugar intake and blood pressure and lipids found that higher  
 7 sugar intakes, compared to lower sugar intakes, significantly raised triglyceride  
 8 concentrations, total cholesterol, and low density lipoprotein cholesterol.<sup>73</sup>

9        95. A cross-sectional study among more than 6,100 U.S. adults from the NHANES  
 10 1999-2006 data were grouped into quintiles for sugar intake as follows: (1) less than 5% of  
 11 calories consumed from sugar, (2) 5% to less than 10%, (3) 10% to less than 17.5%, (4)  
 12 17.5% to less than 25%, and (5) 25% or more. These groups had the following adjusted mean  
 13 HDL levels (because HDL is the “good” cholesterol, higher levels are better): 58.7 mg/dL,  
 14 57.5, 53.7, 51.0, and 47.7. Mean triglyceride levels were 105 mg/dL, 102, 111, 113, and 114.  
 15 Mean LDL levels were 116 mg/dL, 115, 118, 121, and 123 among women, with no  
 16 significant trend among men. Consumers whose sugar intake accounted for more than 10%  
 17 of calories had a 50% - 300% higher risk of low HDL levels compared to those who  
 18 consumed less than 5% of calories from sugar. Likewise, high-sugar consumers had greater  
 19 risk of high triglycerides. All relationships were linear as demonstrated in the charts below.<sup>74</sup>  
 20  
 21  
 22

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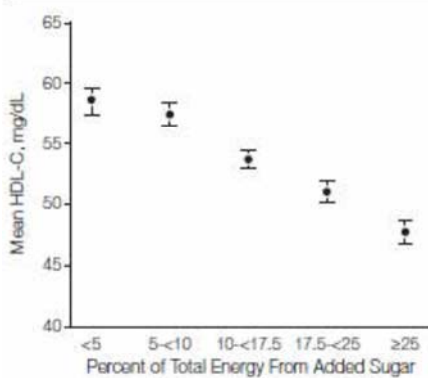
23 <sup>72</sup> Dhingra, *Cardiometabolic Risk*, *supra* n.31.

24 <sup>73</sup> Te Morenga, L., et al., “Dietary sugars and cardiometabolic risk: systematic review and  
 25 meta-analyses of randomized controlled trials on the effects on blood pressure and lipids,”  
 26 *American Journal of Clinical Nutrition*, Vol. 100, No. 1, 65-79 (May 7, 2014).

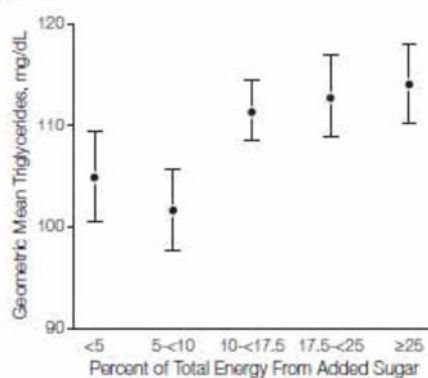
27 <sup>74</sup> Welsh, J.A., et al., “Caloric Sweetener Consumption and Dyslipidemia Among US Adults,”  
 28 *Journal of the American Medical Association*, Vol. 303, No. 15, 1490-97 (April 21, 2010).



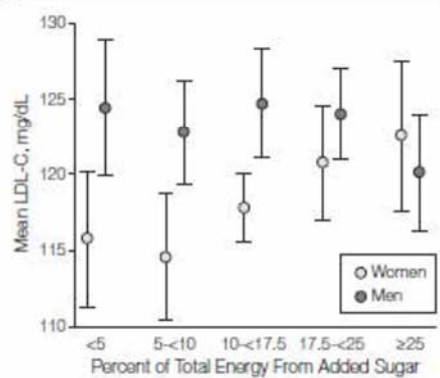
**Figure 1.** Multivariable-Adjusted Mean HDL-C Levels by Level of Added Sugar Intake Among US Adults, NHANES 1999-2006



**Figure 2.** Multivariable-Adjusted Geometric Mean Triglyceride Levels by Level of Added Sugar Intake Among US Adults, NHANES 1999-2006



**Figure 3.** Multivariable-Adjusted Mean LDL-C Levels by Level of Added Sugar Intake Among US Men and Women, NHANES 1999-2006



96. One experimental study showed that, when a 17% fructose diet was provided to healthy men, they showed an increase in plasma triacylglycerol concentrations of 32%.<sup>75</sup>

97. Another 10-week experimental feeding study showed that those who were fed 25% of their energy requirements as fructose experienced increases in LDL cholesterol, small dense LDL cholesterol, and oxidized LDL cholesterol, as well as increased concentrations of triglycerides and total cholesterol, while those fed a 25% diet of glucose did not experience the same adverse effects.<sup>76</sup>

98. In a cross-sectional study of normal weight and overweight children aged 6-14, researchers found that “the only dietary factor that was a significant predictor of LDL particle size was total fructose intake.”<sup>77</sup>

<sup>75</sup> Bantle, J.P., et al., “Effects of dietary fructose on plasma lipids in healthy subjects,” *American Journal of Clinical Nutrition*, Vol. 72, 1128-34 (2000).

<sup>76</sup> Stanhope, K.L., et al., “Consuming fructose-sweetened, not glucose-sweetened, beverages increases visceral adiposity and lipids and decreases insulin sensitivity in overweight/obese humans,” *The Journal of Clinical Investigation*, Vol. 119, No. 5, 1322-34 (May 2009).

<sup>77</sup> Aeberli, I., et al., “Fructose intake is a predictor of LDL particle size in overweight schoolchildren,” *American Journal of Clinical Nutrition*, Vol. 86, 1174-78 (2007).

## H. Excess Sugar Consumption is Associated with Hypertension

99. A study of more than 6,000 participants in the Framingham Heart Study found those who consumed more than 1 soft drink per day had a 22% greater incidence, and an 18% greater risk of high blood pressure than those who consumed less than 1 soft drink per day.<sup>78</sup>

100. An analysis of the NHANES data for more than 4,800 adolescents also showed a positive, linear association between sugar-sweetened beverages and higher systolic blood pressure, as well as corresponding increases in serum uric acid levels.<sup>79</sup>

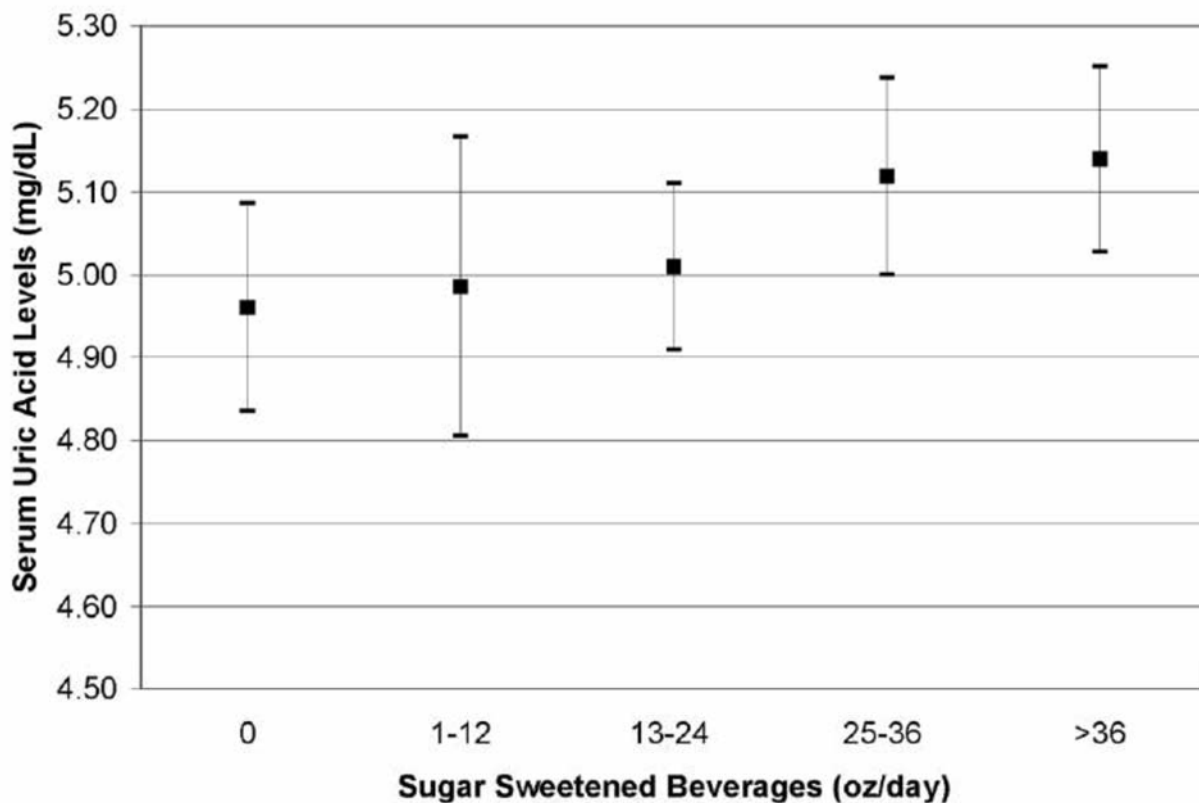


Figure 1.  
Sample mean of serum uric acid with 95% confidence intervals by categories of sugar sweetened beverage consumption adjusted for age, race/ethnicity, sex, total calories, BMI z-score, alcohol, smoking, dietary fiber intake, diet beverage consumption, and milk consumption. *P* for trend = 0.01

<sup>78</sup> Dhingra, *Cardiometabolic Risk*, *supra* n.31.

<sup>79</sup> Nguyen, *Serum Uric Acid*, *supra* n.23.



101. In one study, 15 healthy men drank 500 ml water containing either no sugar, 60 grams of fructose, or 60 grams of glucose. Blood pressure, metabolic rate, and autonomic nervous system activity were measured for 2 hours. While the administration of fructose was associated with an increase in both systolic and diastolic blood pressure, blood pressure did not rise in response to either water or glucose ingestion, as demonstrated in the chart below.<sup>80</sup>

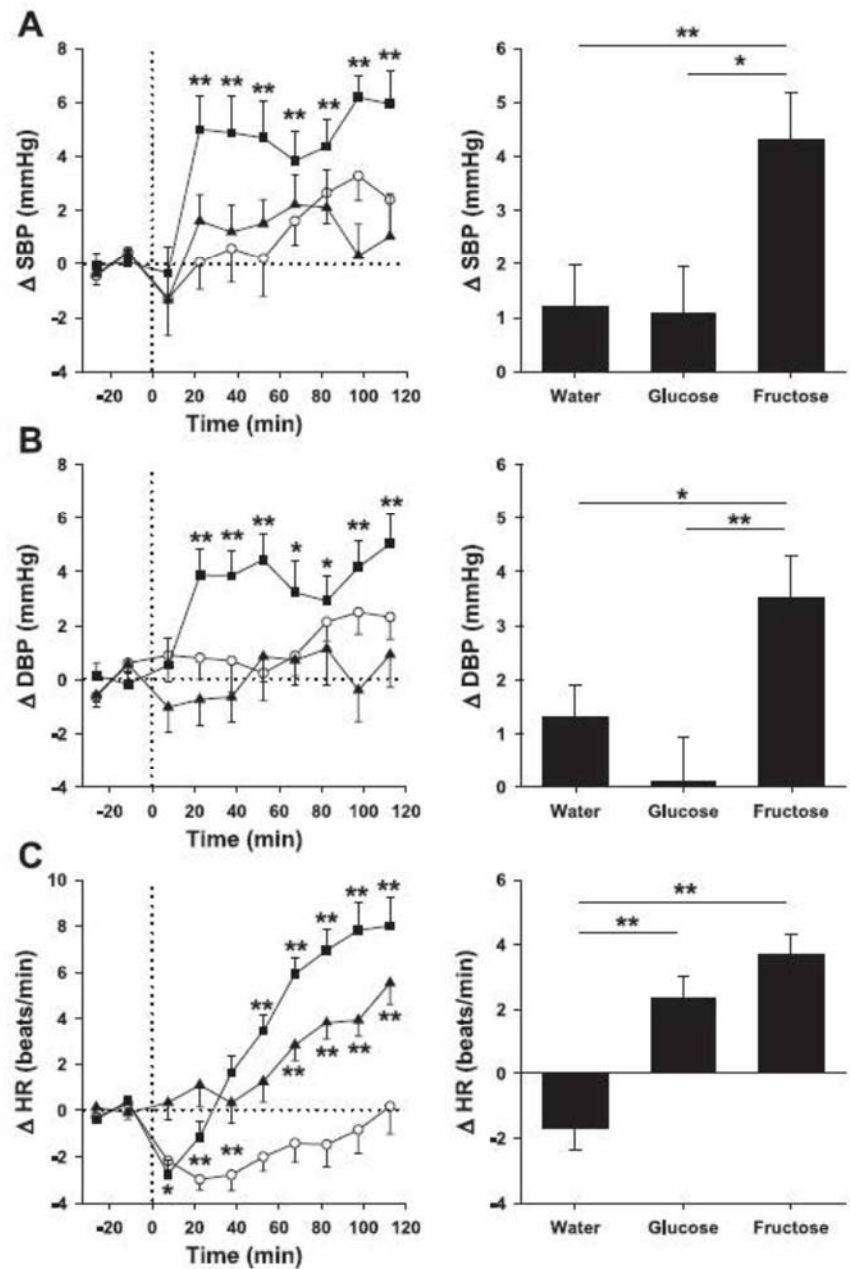


Fig. 1. Time course of the systolic blood pressure (SBP; A), diastolic blood pressure (DBP; B), and heart rate (HR; C) changes (left) and mean responses (right) to drinking water (○), glucose (▲), and fructose (■). \* $P < 0.05$  and \*\* $P < 0.01$ , statistically significant differences over time from baseline values (left) and differences between responses to the drinks (right).

<sup>80</sup> Brown, C.M., et al., "Fructose ingestion acutely elevates blood pressure in healthy young humans," *Am. J. Physiol. Regul. Integr. Compl. Physiol.*, Vol. 294, R730-37 (2008).

102. In another study, more than 40 overweight men and women were supplemented for 10 weeks with either sucrose or artificial sweeteners. The sucrose group saw an increase in systolic and diastolic blood pressure, of 3.8 and 4.1 mm Hg, respectively, while the artificial sweetener group saw a decrease in systolic and diastolic blood pressure, of 3.1 and 1.2 mm Hg, respectively.<sup>81</sup>

103. Another study took a variety of approaches to measuring the association between sugar intake and blood pressure, concluding that an increase of 1 serving of sugar-sweetened beverages per day (*i.e.*, 140-150 calories, and 35-37.5 grams of sugar) was associated with systolic/diastolic blood pressure differences of +1.6 and +0.8 mm Hg (and +1.1/+0.4 mm Hg with adjustment for height and weight), while an increase of 2 servings results in systolic/diastolic blood pressure differences of +3.4/+2.2, demonstrating that the relationship is direct and linear.<sup>82</sup>

#### **I. Excess Sugar Consumption is Associated with Alzheimer's Disease, Dementia, and Cognitive Decline**

104. In a study of over 2,000 participants over 6.8 years, researchers found that higher average glucose levels within the preceding 5 years (115 mg/dL compared to 100 mg/dL) were related to an 18% increased risk of dementia among those without diabetes. For those with diabetes, higher average glucose levels (190 mg/dL compared to 160 mg/dL) were related to a 40% increased risk of dementia.<sup>83</sup>

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<sup>81</sup> Raben, Sucrose vs. Artificial Sweeteners, *supra* n.63.

<sup>82</sup> Brown, I.J., et al., "Sugar-Sweetened Beverage, Sugar Intake of Individuals, and Their Blood Pressure: International Study of Macro/Micronutrients and Blood Pressure," *Hypertension*, Vol. 57, 695-701 (2011).

<sup>83</sup> Crane, P.K., et al., "Glucose Levels and Risk of Dementia," *New England Journal of Medicine*, Vol. 369, No. 6, 540-48 (2013).

105. “To evaluate a possible association between fructose mediated metabolic changes and cognitive behavior,” researchers “assessed the correlation of serum triglyceride and insulin resistance levels with memory,” and “found a positive correlation between serum triglyceride levels and insulin resistance index . . . , which indicates that increased serum triglyceride levels may contribute to increase[d] insulin resistance . . . .” And researchers “found that the latency time varied in proportion to the insulin resistance . . . , which suggests that memory performance may rely on levels of insulin resistance . . . .”<sup>84</sup>

**J. Excess Sugar Consumption is Linked to Some Cancers**

106. In a population-based case-control study involving 424 cases and 398 controls, women in the highest quartile of added sugar intake had an 84% greater risk of endometrial cancer.<sup>85</sup> Similarly, in a study of patients with stage 3 colon cancer, those in the highest quintile of glycemic load experienced worsening in disease-free survival of approximately 80% compared to those in the lowest quintile.<sup>86</sup>

107. A population based case-control study on Malaysian women found a significant, two-fold increased risk of breast cancer among premenopausal and postmenopausal women in the highest quartile of sugar intake.<sup>87</sup>

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<sup>84</sup> Agrawal, R., et al., “‘Metabolic syndrome’ in the brain: deficiency in omega-3 fatty acid exacerbates dysfunctions in insulin receptor signaling and cognition,” *Journal of Physiology*, Vol. 590, No. 10, 2485-99, at 2489 (2012).

<sup>85</sup> King, M.G., et al., “Consumption of Sugary Foods and Drinks and Risk of Endometrial Cancer,” *Cancer Causes Control*, Vol. 24, No. 7, 1427-36 (July 2013).

<sup>86</sup> Meyerhardt, J.A., et al. “Association of dietary patterns with cancer recurrence and survival in patients with stage III colon cancer,” *Journal of the American Medical Association*, Vol. 298, 754-64 (2007).

<sup>87</sup> Sulaiman, S., et al., “Dietary carbohydrate, fiber and sugar and risk of breast cancer according to menopausal status in Malaysia,” *Asian Pacific Journal of Cancer Prevention*, Vol. 15, 5959 (2014).

108. A prospective epidemiological study of nearly 45,000 cancer cases among 436,000 participants aged 50-71, found added sugars were positively associated with risk of esophageal adenocarcinoma; added fructose was associated with risk of small intestine cancer; and all investigated sugars were associated with increased risk of pleural cancer.<sup>88</sup>

**K. Based on the Scientific Evidence, Authoritative Scientific and Health Organizations Recommend Restricting Added Sugar Consumption to Below 5% or 10% of Daily Calories**

109. Based on the scientific research, the American Heart Association recommends restricting added sugar to 5% of calories.<sup>89</sup> Based on the average caloric needs, this equates to 12 grams for children 4 to 8 years old, up to 25 grams for children up to 18 years old, 25 grams for women, and 38 grams for men.

110. The United Kingdom’s dietary guidelines recommend “intake of free sugars”<sup>90</sup> should not exceed 5% of total dietary energy for age groups from 2 years upwards.”<sup>91</sup>

111. The World Health Organization recommends that no more than 10% of an adult’s calories—and ideally less than 5%—should come from added sugar or from natural sugars in honey, syrups, and fruit juice.<sup>92</sup>

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<sup>88</sup> Tasevska, N., et al., “Sugars in diet and risk of cancer in the NIH-AARP Diet and Health Study,” *International Journal of Cancer*, Vol. 130, No. 1, 159-69 (Jan. 1, 2012).

<sup>89</sup> See AHA Scientific Statement, *supra* n.10.

<sup>90</sup> Defined as sugars added to food, naturally present in honey, syrup and fruit juice.

<sup>91</sup> England’s Department of Health, “Sugar Recommendations Department of Health, England,” (Oct. 2015)., available at [https://ec.europa.eu/health/sites/health/files/nutrition\\_physical\\_activity/docs/ev\\_20151028\\_co07\\_en.pdf](https://ec.europa.eu/health/sites/health/files/nutrition_physical_activity/docs/ev_20151028_co07_en.pdf).

<sup>92</sup> See World Health Organization, “Sugars intake for adult and children: Guideline” (March 4, 2014), available at [http://www.who.int/nutrition/publications/guidelines/sugars\\_intake/en](http://www.who.int/nutrition/publications/guidelines/sugars_intake/en) (Based on scientific evidence, recommending adults and children reduce daily intake of free

112. The Food and Drug Administration recently adopted the United States Department of Agriculture’s daily reference value of 50 grams of added sugar, or 10% of calories based on a 2,000-calorie diet. 81 Fed. Reg. 33742, 33820 (May 27, 2016). While the FDA acknowledged the AHA and WHO recommendations to keep added sugars below 5% of calories, it set the DRV at 50 grams or 10% because this was “more realistic considering current consumption of added sugars in the United States as well as added sugars in the food supply.” *Id.* at 33,849. Nevertheless, the FDA’s rulemaking was based, in part, on the 2015 Dietary Guidelines Advisory Committee’s “food pattern analysis,” which—consistent with the AHA and WHO recommendations— “demonstrate[d] that when added sugars in foods and beverages exceeds 3% to 9% of total calories . . . a healthful food pattern may be difficult to achieve . . . .”<sup>93</sup>

#### V. Defendant’s Marketing and Sale of the High-Sugar “Perfect Bars”

113. Consumers prefer healthful foods and are willing to pay more for, and purchase more often, products marketed and labeled as being healthy. For instance, Nielsen’s 2015 Global Health & Wellness Survey found that “88% of those polled are willing to pay more for healthier foods.”<sup>94</sup>

114. Defendant employs a strategic marketing campaign intended to appeal to consumers interested in healthful foods in order to increase sales and profits, despite that the high-sugar bars are detrimental to health.

115. For example, during the class period, Defendant also made the following misleading health and wellness claims regarding the Products on its website:

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sugars to less than 10% of total energy intake and noting that “[a] further reduction to below 5% or roughly 25 grams (6 teaspoons) per say would provide additional health benefits.”).

<sup>93</sup> U.S. Department of Agriculture, “Scientific Report of the 2015 Dietary Guidelines Advisory Committee” (February 2015), Ch. 6 p.26.

<sup>94</sup> Nancy Gagliardi, Forbes, Consumers Want Healthy Foods--And Will Pay More For Them (Feb. 18, 2015) (citing Neilson, 2015 Global Health & Wellness Survey, at 11 (Jan. 2015)).

- a) “Take one of these delicious energy bars on the go, so you can eat healthy wherever you are.”
- b) “Perfect Bar is ...incredibly nutritious...”
- c) “...add high quality protein and 20 organic superfoods and use Mother Nature’s preservative...”
- d) “our green array will leave you feeling stronger and full of good-for-you nutrients”

116. Defendant also attempts to distinguish its bars from competitors by claiming that its Products have “nutritious qualities that make us different from the rest.”<sup>95</sup>

117. Defendant also expressly mischaracterizes honey (the primary added sugar in the Products) as a “Complex Carbohydrate.” “Sweetened with organic honey, a complex carbohydrate that will ensure your energy levels last.” This claim is misleading because honey is an added sugar with its caloric content coming almost exclusively from fructose, glucose, maltose, sucrose, and other sugars.

118. As described in detail below, Defendant also uses the packaging and labeling of the high-sugar Perfect Bars to convey a health and wellness message meant to appeal to consumers interested in healthful foods.

119. Defendant does this despite expressly recognizing the dangers of added sugar. In fact, it expressly warns consumers to “Avoid added sugars as much as possible. Consuming natural forms of sugar in fruits is much better for your health and can limit excess weight gain. The recommendation is to consume <10% of our total calories from added sugars.”<sup>96</sup>

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<sup>95</sup> Perfect Bar, The Hive, “What Makes Perfect Bar Different?” *available at*: <https://perfectbar.com/makes-perfect-bar-different> (last visited August 6, 2018).

<sup>96</sup> Perfect Bar, *available at* <https://perfectbar.com/why-ingredient-lists-reign-supreme-over-nutrition-facts-2/> (last visited August 3, 2018).



120. Perfect Bar, LLC has had great success using its health and wellness marketing strategy. Today, Perfect Bar claims its Products are sold in over 12,000 stores nationwide, and claims to be the “number seven best-selling brand of snack bar in the natural channel nationwide.”<sup>97</sup>

**A. The High-Sugar Perfect Bars’ Composition**

121. Defendant sells or has sold during the class period at least 15 flavors of Perfect Bars that are challenged here. *See* Appendix 1. Plaintiffs reserve the right to amend the complaint to add additional flavors or varieties based on discovery, but currently challenge the following Product flavors: Almond Acai, Almond Butter, Blueberry Cashew, Carob Chip, Coconut Peanut Butter, Cranberry Crunch, Dark Chocolate Almond, Dark Chocolate Chip Peanut Butter, Fruit and Nut, Maple Almond, Mocha Chip, Peanut Butter, and Pumpkin Pie.<sup>98</sup> Defendant also sells two flavors of Mini Perfect Bars, Almond Butter and Peanut Butter, which are also challenged here.

122. The Perfect Bars range in serving size from 45 grams to 71 grams, with between 220 and 340 total calories.

123. The Mini Perfect Bars are 21 grams, with 100 calories.

124. As shown in Appendix 1, each (non-mini) Perfect Bar contains between 12 and 17 grams of added sugar, with between 16 and 24 percent of calories coming from added sugar.<sup>99</sup> This means a single Perfect Bar contains up to 68 percent of the AHA’s Maximum Recommended Daily Intake (DI) of Added Sugars for women and 44 percent for men.

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<sup>97</sup> Food Navigator, Elaine Watson, “Bars get fresh! Perfect Bar founder on bootstrapping, refusing to quit, and creating a completely new snacking category” (March 20, 2015) *available at*: <http://foodnavigator-usa.com/Manufacturers/Perfect-Bar-sales-grow-120-in-2014-says-CEO-Bill-Keith> (last visited August 6, 2018).

<sup>98</sup> Defendant has also sold or sells Almond Coconut and Chocolate Walnut Brownie flavors but those products are not presently part of this case.

<sup>99</sup> Although the Products’ formulations, and thus the precise amount of their added sugar is in Defendant’s exclusive possession, custody, and control, Plaintiffs, through investigation,

125. The amount of total grams, total calories, total sugar, added sugar, and percent of calories from added sugar for a serving of each flavor of the high-sugar Perfect Bars is set forth in the table below:

Perfect Bar Flavor	Total grams	Total Calories	Total Sugar (grams)	Added Sugar (grams)	% Calories From Added Sugar
Almond Acai	45	200	13	12	24%
Almond Butter	64	300	18	16	21%
Almond Butter (mini)	21	100	6	5	20%
Blueberry Cashew	65	300	18	16	21%
Carob Chip	71	310	18	16	21%
Coconut Peanut Butter	71	340	19	17	20%
Cranberry Crunch	45	220	13	12	22%
Dark Chocolate Almond	62	310	17	15	19%
Dark Chocolate Chip Peanut Butter	65	320	18	16	20%
Fruit and Nut	71	310	18	15	19%
Maple Almond	65	310	18	16	20%
Mocha Chip	62	330	16	14	17%
Peanut Butter	71	310	17	15	19%
Peanut Butter (mini)	21	100	6	5	20%
Pumpkin Pie	62	320	15	13	16%

#### **B. The Perfect Bars' Misleading Packaging and Labeling Claims**

126. Despite that the Perfect Bars are loaded with added sugar, Defendant prominently labels the bars with claims suggesting they are healthy or conducive to good health and physical well-being.

identify the approximate amount of added sugar upon information and belief. The information set forth in Appendix 1 is made on the best information available at the time of filing. However, in certain cases some aspects of the table in Appendix 1 may be incomplete or inaccurate. Plaintiffs reserve the right to amend their specific challenges, following discovery.

127. Below are representative exemplars of the labeling of the Products. In Figure 1, is a version of the label bearing the “Our Story” claim that was eventually refreshed by a label version seen in Figure 2, bearing the “Our Family Story” claim. The labels of each flavor are substantially similar and bear the same challenged claims regardless of flavor.<sup>100</sup>



Figure 1.

<sup>100</sup> The only difference in the challenge claims between flavors of the products is the amount of protein claimed to be present in each flavor.

*Clark et al. v. Perfect Bar, LLC*  
CLASS ACTION COMPLAINT



128. Typically, the Products are sold as individual bars as seen below in Figure 3.



Figure 3.

129. The Products, however, are also occasionally sold in boxes of multiple bars. Below in Figure 4 and 5 are representative exemplars of box in which the Products are currently sold.



Figure 4.

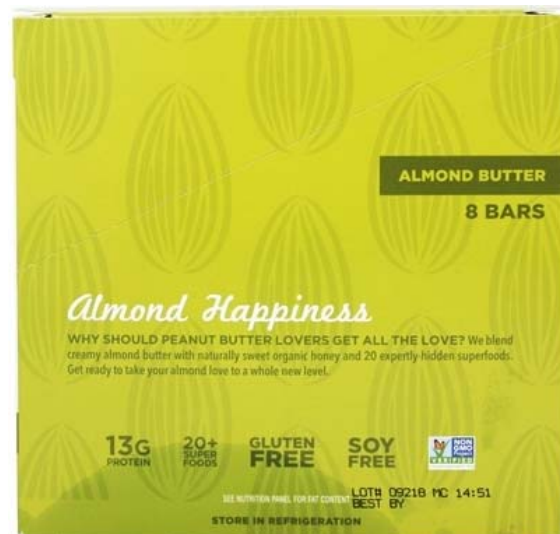


Figure 5.

1        **130. Misleading “Our Story” and “Our Family Story” claims:** On both the  
 2 packaging (boxes of multipacks) and labeling (individual bars’ wrappers) Defendant places  
 3 one of the following claims:<sup>101</sup>

4            a.        “Our Story You could say our dad, Dr. Bud Keith, was grounded in  
 5 nutrition, he was a health food pioneer before many people had heard of ‘health food’  
 6 and he and mom were determined to help us eat right. One day, after mixing a variety  
 7 of superfood blends into organic peanut butter and honey-dad proclaimed, ‘it’s  
 8 perfect,’ and the Perfect Bar was born. Today, the oldest of the Keith kids are sharing  
 9 dad’s recipe with the world. No chemicals, preservatives or refined sugar. Just an  
 10 incredible combination of nutrition and taste that’s grounded in perfection. Enjoy.”

11            b.        “Our Family Story – Our dad, Bud Keith, was a health food pioneer  
 12 before most folks had heard of ‘health food.’ To help our king size family eat right on  
 13 the go, he mixed organic nut butter and honey with a superfood blend and proclaimed,  
 14 ‘It’s perfect!’ – and the Perfect Bar recipe was born. Today, us kids are sharing dad’s  
 15 fresh protein bar recipe with the world. Combining whole food protein, clean  
 16 ingredients and incredible taste. It’s a bar so fresh, it belongs in the fridge. Get the  
 17 whole nutty story at perfectbar.com.”

18        131.        These claims, individually and in the context of the label as a whole, convey  
 19 that the Products are healthy, conducive to good health, and/or will not detriment health.  
 20 This message is false and misleading because due to the amount of added sugar in the  
 21 Products the Products are not healthy but rather contribute to excessive sugar consumption.

22        **132. Misleading “Superfood” Claim:** On both the packaging (boxes of  
 23 multipacks) and labeling (individual bars’ wrappers) of each of the Products, Defendant  
 24 places the claim “20+ Superfoods.” “Superfood” is a term for “food[s] considered to be  
 25

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26        <sup>101</sup> The “Our Story” claim was updated and replaced by the substantially similar “Our Family  
 27 Story” claim.  
 28



1 especially beneficial for health and well-being.”<sup>102</sup> This claim, individually and in the  
 2 context of the label or packaging as a whole, conveys that the Products are healthy,  
 3 conducive to good health, and/or will not detriment health. This message is false and  
 4 misleading because the Products are unhealthy and the message is incompatible with the  
 5 dangers of excessive sugar consumption to which the Products contribute.

6 133. **Misleading “Original Refrigerated Protein Bar” Claim:** On the labels of  
 7 the Products, Defendant represents that the Products are “The Original Refrigerated Protein  
 8 Bar.” This claim is misleading for two reasons.

9 134. First, it contributes to the misleading message that the Products are healthy  
 10 through a “‘health halo[,]’ in which a claim about single healthy quality gives rise to more  
 11 positive impression of other, nonclaimed qualities.”<sup>103</sup> “Research has consistently found that  
 12 claims on food product labels have halo effects (Andrews et al., 2011); they have a positive  
 13 effect on consumers’ perceptions about product characteristics not mentioned in the claim  
 14 (Andrews et al., 2011; Schuldt, 2013).”<sup>104</sup> More specifically, studies “evidence that ‘protein’  
 15 claims on food labeling can increase not only the perceived amount of protein contained by  
 16 the product, but also increase perceptions of other nonclaimed “healthy” nutrients. These  
 17

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18 <sup>102</sup> Oxford Dictionary Online, available at  
 19 [http://www.oxforddictionaries.com/us/definition/american\\_english/superfood](http://www.oxforddictionaries.com/us/definition/american_english/superfood).

20 <sup>103</sup> Catherine Fernan *et al.*, *Health Halo Effects from Product Titles and Nutrient Content*  
 21 *Claims in the Context of “Protein” Bars*, Health Communication, at 2 (August 30, 2017),  
 22 available at <http://dx.doi.org/10.1080/10410236.2017.1358240>.

23 <sup>104</sup> Irina A. Iles *et al.*, *Nutrient Content Claims: How They Impact Perceived Healthfulness*  
 24 *of Fortified Snack Foods and the Moderating Effects of Nutrition Facts Labels*, Health  
 25 Communication, (August 20, 2017) (“Results indicated that the presence of an [Nutrient  
 26 Content Claim] on a fortified snack food product increased perceived healthfulness of that  
 27 product, perceptions of the presence of healthful nutrients, and intentions to consume the  
 28 product. The presence of NCCs also decreased perceptions of the presence of certain less  
 healthful nutrients”), available at <http://dx.doi.org/10.1080/10410236.2017.1351277>.

1 results are consistent with halo effect theory’s prediction that consumers tend to  
 2 overgeneralize from specific health claims, particularly when those claims relate to nutrients  
 3 that are perceived positively (Andrews et al., 1998; Chandon, 2012). That is, to the extent  
 4 that “protein” labeling created an initial positive impression of the product—which is likely  
 5 given protein’s positive reputation—the heightened cognitive accessibility of healthy and  
 6 positive association appear to have exerted a significant effect on participants’ subsequent,  
 7 health-relevant judgments (here, perceptions of non-claimed nutrients as well as the  
 8 product’s overall healthfulness).<sup>105</sup> In particular, including the term protein “within the  
 9 product title itself . . . went beyond increasing perceptions of protein content, spilling over  
 10 to increase perceptions of . . . the overall healthfulness of the product.”<sup>106</sup>

11 135. Second, describing the Products as “The Original Refrigerated Protein Bar”  
 12 highlights protein as the characterizing nutrient thereby creating the impression that the  
 13 Products are predominantly composed of protein or at least a substantial portion comes from  
 14 protein. This is misleading because the Products are predominantly fat and sugar—not  
 15 protein. In fact, the Products contain both more grams of sugar and more grams of fat than  
 16 grams of protein.<sup>107</sup> And, on average, the Products contain 155 calories from fat, 67 calories  
 17 from sugar, and only 53 calories from protein. In the Almond Acai bar, for example, 100  
 18 calories come from fat, 52 calories come from sugar, and only 28 calories come from protein.

19 **C. Defendant Deceptively Omits, Intentionally Distracts From, and**  
 20 **Otherwise Downplays the Bars’ High Added Sugar Content**

21 136. In marketing its bars with health and wellness claims, Defendant regularly and  
 22 intentionally omits material information regarding the amount and dangers of the added  
 23

24 <sup>105</sup> Catherine Fernan *et al.*, *Health Halo Effects from Product Titles and Nutrient Content*  
 25 *Claims in the Context of “Protein” Bars*, Health Communication, at 8.

26 <sup>106</sup> *Id.*

27 <sup>107</sup> The *only* exception is for the Peanut Butter flavor, which has *equal* amount of total fat,  
 28 sugar and protein.

sugars in its Products. Defendant is under a duty to disclose this information to consumers because (a) Defendant is revealing *some* information about its products—enough to suggest they are healthy or conducive to good physical health—without revealing additional material information—that the amount of added sugar in the bars has detrimental health effects, (b) Defendant’s deceptive omissions concern human health, and specifically the detrimental health consequences of consuming its Products, (c) Defendant was in a superior position to know of the dangers presented by the added sugars in its bars, as it is a food company whose business depends upon food science and holds itself out to be a leader in health bars, and (d) Defendant actively concealed material facts not known to Plaintiffs and the class.

137. As described above, in marketing its bars, Defendant regularly affirmatively uses certain words and phrases to suggest its Products are healthy or conducive to good health and physical well-being, which is misleading given their added sugar content.<sup>108</sup> In light of these voluntary statements, Defendant therefore has a duty to disclose information regarding the harmful effects of the added sugar in its Products.

## **VI. The Labeling of the High-Sugar Products Violates California, New York, and Federal Laws and Regulations**

### **A. Any Violation of Federal Food Labeling Statutes or Regulations is a Violation of California and New York Law**

138. “California, [and] New York . . . broadly prohibit the misbranding of food in language largely identical to that found in the FDCA.” *Ackerman v. Coca-Cola Co.*, 2010 U.S. Dist. LEXIS 73156, at \*12 (E.D.N.Y. July 21, 2010).

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<sup>108</sup> See Irina A. Iles *et al.*, *Nutrient Content Claims: How They Impact Perceived Healthfulness of Fortified Snack Foods and the Moderating Effects of Nutrition Facts Labels*, Health Communication, (August 20, 2017) (“Results indicated that the presence of an [Nutrient Content Claim] on a fortified snack food product increased perceived healthfulness of that product, perceptions of the presence of healthful nutrients, and intentions to consume the product. The presence of NCCs also decreased perceptions of the presence of certain less healthful nutrients”).

139. The Products and their labeling violate California Health and Safety Code §§ 109875, *et. seq.* (the “Sherman Law”), which has expressly adopted the federal food labeling requirements as its own. *See* Cal. Health & Safety Code § 110665.

140. Under the Sherman Law, any violation the Federal Food Federal Food, Drug, and Cosmetic Act and/or federal regulations is also a violation of the Sherman Law. *See* Cal. Health & Safety Code § 110665 (“Any food is misbranded if its labeling does not conform with the requirements for nutrition labeling as set forth in Section 403(q) (21 U.S.C. Sec. 343(q)) of the federal act and the regulation adopted pursuant thereto.”).

141. “New York’s Agriculture and Marketing law similarly . . . incorporates the FDCA’s labeling provisions found in 21 C.F.R. part 101.” *Ackerman*, 2010 U.S. Dist. LEXIS 73156, \*12 (citing N.Y. Comp. Codes R. & Regs. tit. 1, § 259.1).

142. The Federal Food Federal Food, Drug, and Cosmetic Act expressly authorizes state regulations, such as such as the Sherman Law and New York’s Agriculture and Marketing Law, that are “identical to the requirement[s]” of the FDCA and federal regulations. *See* 21 U.S.C. § 343-1.

143. Because the Sherman Law’s and the New York’s Agriculture and Marketing Law’s requirements are identical to the requirements of the Federal Food, Drug, and Cosmetic Act and FDA regulations, the Sherman Law and New York’s Agriculture and Marketing Law are explicitly authorized by the FDCA.

**B. The High-Sugar Products’ False and Misleading Labeling Claims Render Them Misbranded**

144. Defendant’s deceptive statements violate Cal. Health & Safety Code § 109875, N.Y. Agric. & Mkts. Law § 201, and 21 U.S.C. § 343(a), which deem a food product misbranded when its label is “false or misleading in any particular.”

145. As described above, the Products’ label contains numerous statements that are false or misleading because they state, suggest, or imply that the Products are healthy or conducive to good health and physical well-being, which render them misbranded.

146. In addition, Defendant's health and wellness statements challenged herein also "fail[ed] to reveal facts that are material in light of other representations made or suggested by the statement[s], word[s], design[s], device[s], or any combination thereof," in violation of 21 C.F.R. § 1.21(a)(1). Such facts include the detrimental health consequences of consuming added sugars in amounts present in the challenged products.

147. Defendant similarly failed to reveal facts that were "[m]aterial with respect to the consequences which may result from use of the article under" both "[t]he conditions prescribed in such labeling," and "such conditions of use as are customary or usual," in violation of § 1.21(a)(2). Namely, Defendant failed to disclose the increased risk of serious chronic disease likely to result from the usual consumption of its Products.

**C. The Products are Misbranded Because they Bear Nutrient Content Claims Without Complying with the Requirements for Making those Claims**

148. The Products are misbranded because their labels bear nutrient content claims that they do not meet the regulatory requirements to bear.

149. Under 21 U.S.C. § 343(r)(1)(A), a claim that characterizes the level of a nutrient, which is of the type required to be in the labeling of the food, must be made in accordance with a regulation promulgated by the Secretary (or, by delegation, the FDA) authorizing the use of such a claim. *See also* Cal. Health & Safety Code § 110670 ("Any food is misbranded if its labeling does not conform with the requirements for nutrient content or health claims" set by federal law.); N.Y. Comp. Codes R. & Regs. tit. 1, § 259.1 (adopting regulations found in 21 C.F.R. § 101 as New York Law).

150. Characterizing the level of a nutrient on food labels and labeling of a product without complying with the specific requirements pertaining to nutrient content claims for that nutrient renders the product misbranded under 21 U.S.C. § 343(r)(1)(A).

151. Under 21 C.F.R. § 101.13(h), a food that bears an express or implied nutrient content claim, and contains more than 13 grams of total fat or 4 grams of saturated fat per labeled serving, must also bear a disclosure statement on the label, immediately adjacent to

the claim, referring the consumer to nutrition information for that nutrient, *e.g.*, “See nutrition information for total fat and saturated fat content.” 21 C.F.R. § 101.13(h)(1).

152. As seen below, for both Label Version A and Label Version B, the Products bear an express protein nutrient content claim. Each Product regardless of flavor bears a protein nutrient content claim only varying in the amount of protein claimed (*e.g.*, “13G PROTEIN” (Almond Butter) or “7G PROTEIN” (Almond Acai)), from one flavor to the next.

153. For example, as seen below, the Almond Butter flavor bears the claim “13g Protein.” Each Product bears a similar express protein nutrient content claim.



Figure 6 (Version A).



Figure 7 (Version B).

154. The following flavors of the Products (the “Misbranded Products”) contain more than 13 grams of total fat: Almond Butter, Blueberry Cashew, Carob Chip, Coconut Peanut Butter, Dark Chocolate Almond, Dark Chocolate Chip Peanut Butter, Fruit and Nut, Maple Almond, Mocha Chip, Peanut Butter, Pumpkin Pie (the “Misbranded Products”). *See*



1 Appendix 1. Thus, each of these Products is required to bear the total fat disclaimer statement  
2 if the label bears a nutrient content claim. But none of the Misbranded Products bore any  
3 disclosure statement when they were sold with the Version A label, which bore a protein  
4 nutrient content claim.<sup>109</sup>

5 155. All of the Misbranded Products, also violated requirements for the disclosure  
6 statement when sold with Label Version B.

7 156. Specifically, the Misbranded Products with Label Version B fail to comply with  
8 the placement and size requirements for making a disclosure statement.

9 157. Under 21 C.F.R. § 101.13(h)(4)(ii), “[t]he disclosure statement shall be  
10 immediately adjacent to the nutrient content claim.” Although the Label Version B contains  
11 a disclosure statement, it is not “*immediately adjacent*” to the protein claim. In fact,  
12 Defendant intentionally tries to obscure the disclosure.

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25 <sup>109</sup> Based on investigation, it appears that certain of the Misbranded Products were not sold  
26 with Label Version A because they were only introduced more recently. Nevertheless, those  
27 flavors that were only sold with Label Version B, were nevertheless misbranded. Through  
28 discovery, Plaintiffs will be able to identify which flavors of the Misbranded Products were  
sold with only Label Version B and which were also sold with Label Version A.

158. As seen in Figure 8, there is no disclosure immediately adjacent to the protein nutrient content claim.



Figure 8.

159. Instead, Defendant intentionally designed the label in such a way as to obscure the disclosure statement by placing the disclosure statement—*not immediately adjacent to the protein nutrient content claim*—but placing it separately, on a distinctly colored portion of the label that is both *below and to the left* of the nutrient content claim. Placement is such that the claim is not even visible when viewing the products straight on. *See* Figure 9.



Figure 9.

160. In fact, the disclosure statement is only truly visible and legible when viewing the Misbranded Products from the left side. *See* Figure 10. Accordingly, the Misbranded Products that were sold with Label Version B are misbranded as they fail to comply with the requirements of 21 C.F.R. § 101.13(h)(4)(ii).

161. In addition to the disclosure statement failing to comply with the placement requirement, the statement is in smaller font than is permissible by regulation.

162. Under 21 C.F.R. § 101.13(h)(4)(i), “[t]he disclosure statement “See nutrition information for \_\_ content” shall be in easily legible boldface print or type, in distinct contrast to other printed or graphic matter, and *in a size no less than that required by 101.7(i)*<sup>110</sup> for the net quantity of contents statement, except where the size of the claim is

<sup>110</sup> Section 101.7(i)(2) provides that the height be not less than *one-eighth inch* in height on packages the principal display panel of which has an area of more than 5 but not more than 25 square inches, which is the size range in which the Products’ principle display panel falls.

1 *less than two times the required size of the net quantity of contents statement, in which case*  
 2 *the disclosure statement shall be no less than one-half the size of the claim but no smaller*  
 3 *than one-sixteenth of an inch, unless the package complies with 101.2(c)(2), in which case*  
 4 *the disclosure statement may be in type of not less than one thirty-second of an inch.”*

5 163. Under the applicable provision, 21 C.F.R. § 101.7(i)(2), the statement of  
 6 identity must be no less than “one-eighth inch in height.” The disclosure statement, however,  
 7 is only one-sixteenth of an inch in height.

8 164. Further the exception within 21 C.F.R. § 101.13(h)(4)(i) that “where the size  
 9 of the [nutrient content] claim is less than two times the required size of the net quantity of  
 10 contents statement, in which case the disclosure statement shall be no less than one-half the  
 11 size of the claim but no smaller than one-sixteenth of an inch” does not apply. The required  
 12 size of the net quantity of contents statement is one-eighth inch in height. The protein nutrient  
 13 content claim on the Misbranded Products’ label, however, is three-eighths of an inch in total  
 14 height.<sup>111</sup> Thus, the nutrient content claim is not less than two times the size of the net  
 15 quantity of contents statement as required for the exception to apply.

16 165. Even if the exception applied, the Products do not meet the requirements of  
 17 the exception since the disclosure statement is only one-sixteenth of an inch in height, less  
 18 than half the size of the nutrient content claim.

19 166. This neither complies with the spirit nor the letter of the law. Thus, all of the  
 20 Misbranded Products sold with Label Version B are misbranded.

## 21 **VII. Plaintiffs’ Purchase, Reliance, and Injury**

22 167. Plaintiffs were exposed to, read, and relied upon Defendant’s claims upon the  
 23 Products’ labeling and packaging that were intended to appeal to consumers, such as  
 24 themselves, that are interested in health and nutrition and that convey a misleading health  
 25 and wellness message.

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26  
 27 <sup>111</sup> The “13G” portion of the claim alone stands one-fourth of an inch in height (exactly  
 28 twice—not less—than the height of the net quantity statement.

1 168. Mr. Clark purchased a Peanut Butter flavor Perfect Bar in or about March of  
 2 2018. He purchased the Perfect Bar at Trader Joe's located at 555 9th St., San Francisco,  
 3 California 94103.

4 169. To the best of his recollection, when deciding to purchase the high-sugar  
 5 Product, Mr. Clark read and relied on the following deceptive claims contained on the  
 6 labeling and packaging of the Products:

- 7 a. "20+ superfoods"
- 8 b. "17Gg PROTEIN"
- 9 c. "THE ORIGINAL REFRIGERATED PROTEIN BAR"
- 10 d. "Our Family Story [:] Our dad, Bud Keith, was a health food pioneer  
 11 before most folks had heard of 'health food.' To help our king size family eat right on  
 12 the go, he mixed organic nut butter and honey with a superfood blend and proclaimed,  
 13 'It's perfect!' and the Perfect Bar recipe was born. Today, us kids are sharing dad's  
 14 fresh protein bar recipe with the world. Combining whole food protein, clean  
 15 ingredients and incredible taste. It's a bar so fresh it belongs in the fridge. Get the  
 16 whole nutty story at perfectbar.com"

17 170. Mr. Clark believed these claims regarding the health and nutrition qualities of  
 18 the Products, which are deceptive because they convey that the Products are healthy despite  
 19 that the Products contain excessive sugar, which detracts health.

20 171. Mr. Sims believes he began purchasing the Products in early 2016. From  
 21 that time, to his most recent purchase in approximately July 2018, he purchased a  
 22 approximately 5 bars per week in a variety of flavors, most often, from the Trader Joes  
 23 located at 79 Wolf Rd. in Colonie, NY 12205. He paid approximately \$1.99-\$2.49 per bar.

24 172. To the best of his recollection, when deciding to purchase the Products Mr.  
 25 Sims read and relied on the following deceptive claims on the packaging of the Products:

- 26 a. "20+ superfoods"
- 27 b. "\_\_ G PROTEIN"
- 28 c. "THE ORIGINAL REFRIGERATED PROTEIN BAR"

1 d. “Our Family Story [:] Our dad, Bud Keith, was a health food pioneer  
2 before most folks had heard of ‘health food.’ To help our king size family eat right on  
3 the go, he mixed organic nut butter and honey with a superfood blend and proclaimed,  
4 ‘It’s perfect!’ and the Perfect Bar recipe was born. Today, us kids are sharing dad’s  
5 fresh protein bar recipe with the world. Combining whole food protein, clean  
6 ingredients and incredible taste. It’s a bar so fresh it belongs in the fridge. Get the  
7 whole nutty story at perfectbar.com”

8 e. “Our Story You could say our dad, Dr. Bud Keith, was grounded in  
9 nutrition, he was a health food pioneer before many people had heard of ‘health food’  
10 and he and mom were determined to help us eat right. One day, after mixing a variety  
11 of superfood blends into organic peanut butter and honey-dad proclaimed, ‘it’s  
12 perfect,’ and the Perfect Bar was born. Today, the oldest of the Keith kids are sharing  
13 dad’s recipe with the world. No chemicals, preservatives or refined sugar. Just an  
14 incredible combination of nutrition and taste that’s grounded in perfection. Enjoy.”

15 173. Mr. Sims believed these claims regarding the health and wellness qualities  
16 of the Products, which are deceptive because they are incompatible with the dangers of the  
17 excessive sugar consumption to which the Products contribute.

18 174. When purchasing the Products, Plaintiffs were seeking a product that was  
19 healthy to consume, that is, whose consumption would not increase their risk of CHD, stroke,  
20 and other morbidity.

21 175. The health and wellness representations on the Products, however, were  
22 misleading, and had the capacity, tendency, and likelihood to confuse or confound Plaintiffs  
23 and other consumers acting reasonably (including the putative class) because, as described  
24 in detail herein, the Products are not healthy.

25 176. Plaintiffs are not nutritionists, food experts, or food scientists, but rather lay  
26 consumers, who did not have the specialized knowledge that Defendant had regarding the  
27 nutrients present in its Products. At the time of purchase, Plaintiffs were unaware of the  
28 extent to which consuming high amounts of added sugar, in any form, adversely affects



1 blood cholesterol levels and increases risk of CHD, stroke, and other morbidity, or what  
2 amount of added sugar might have such an effect.

3 177. The average and reasonable consumer is unaware of the extent to which  
4 consuming high amounts of added sugar, in any form, adversely affects blood cholesterol  
5 levels and increases risk of CHD, stroke, and other morbidity, or what amount of added sugar  
6 might have such an effect.

7 178. Plaintiffs acted reasonably in relying on Defendant's health and wellness  
8 marketing, which Defendant intentionally placed on the Products' labeling with the intent to  
9 induce average consumers into purchasing the Products.

10 179. Plaintiffs would not have purchased the Products or not been willing to pay the  
11 premium that they cost if they knew that the labeling claims were false and misleading in  
12 that the Products were not as healthy as represented but actually harm health.

13 180. The high-sugar Products cost more than similar Products without misleading  
14 labeling, and would have cost less absent the false and misleading statements.

15 181. Through the misleading labeling claims, Defendant was able to gain a greater  
16 share of the health-bar market than it would have otherwise and also increased the size of  
17 the market.

18 182. Plaintiffs paid more for the high-sugar Products, and would only have been  
19 willing to pay less, or unwilling to purchase the Product at all, absent the false and misleading  
20 labeling complained of herein.

21 183. Plaintiffs and members of the Class would not have purchased the high-sugar  
22 Products if it were known to them that the Products are misbranded pursuant to California,  
23 New York and FDA regulations or that their claims were false or misleading.

24 184. Plaintiffs would not have purchased the Products had they known the truth  
25 about the health impacts of consuming the Products.

26 185. For these reasons, the high-sugar Perfect Bar Products were worth less than  
27 what Plaintiffs and the Class paid for them.  
28

1 186. Instead of receiving products that had actual healthful qualities, the Products  
2 Plaintiffs and the Class received were not healthy.

3 187. Plaintiffs and the Class lost money as a result of Defendant's deceptive claims  
4 and practices in that they did not receive what they paid for when purchasing the high-sugar  
5 Products.

6 188. Plaintiffs and the Class detrimentally altered their position and suffered  
7 damages in an amount equal to the amount they paid for the high-sugar Perfect Bar Products.

8 189. Plaintiffs continue to desire to purchase healthy nutrition bars, and continue to  
9 see the Products in the stores in which they shop.

10 190. Plaintiffs would purchase the challenged Products in the future if they were in  
11 fact healthy, but unless Defendant is enjoined in the manner Plaintiffs request, they may not  
12 be able to reasonably determine whether the Products have been reformulated to conform to  
13 the misleading claims.

14 191. Plaintiffs would likely purchase the challenged Products if they could trust that  
15 the health and wellness claims were not false or misleading, but absent an injunction,  
16 Plaintiffs will be unable to trust the representations on the Products when they encounter  
17 them, as they frequently do, where they shop.

18 192. Plaintiffs' substantive right to a marketplace free of fraud, where they are  
19 entitled to rely on representations such as those made by Defendant with confidence  
20 continues to be violated every time Plaintiffs are exposed to a misleading Products labeling  
21 claims—which they cannot trust as being truthful.

22 193. If Plaintiffs could be assured that any health and wellness claims on the  
23 challenged Products were lawful and not misleading, they would consider purchasing the  
24 Products in the future.

25 **CLASS ACTION ALLEGATIONS**

26 194. Pursuant to Rule 23, Plaintiffs bring this action on behalf of themselves and a  
27 class of all persons in the United States (or alternatively all persons in California and New  
28

1 York) who purchased the high-sugar Products, for personal or household use, and not for  
2 resale or distribution purposes.

3 195. The members in the proposed Class are so numerous that individual joinder of  
4 all members is impracticable, and the disposition of the claims of all Class Members in a  
5 single action will provide substantial benefits to the parties and Court.

6 196. Questions of law and fact common to Plaintiffs and the Class include:

7 a. whether Defendant communicated a message regarding healthfulness of  
8 the Products through their packaging and advertising;

9 b. whether that message was material, or likely to be material to a  
10 reasonable consumer;

11 c. whether the challenged claims discussed above are false, misleading, or  
12 reasonably likely to deceive a reasonable consumer;

13 d. whether Defendant's conduct violates public policy;

14 e. whether Defendant's conduct constitutes violations of the laws asserted  
15 herein;

16 f. whether Defendant engaged in false or misleading advertising;

17 g. whether the Products are misbranded;

18 h. whether Defendants breached warranties;

19 i. whether Plaintiffs and Class members are entitled to declaratory and  
20 injunctive relief; and

21 j. whether Plaintiffs and Class members are entitled to actual damages,  
22 statutory damages, restitution, punitive damages, attorneys' fees and costs, injunctive,  
23 and the amount of that or any other relief.

24 197. These common questions of law and fact predominate over questions that affect  
25 only individual Class Members.

26 198. Plaintiff's claims are typical of Class Members' claims because they are based  
27 on the same underlying conduct by Defendant. Specifically, all Class Members, including  
28 Plaintiffs, were subjected to the same misleading and deceptive conduct when they

1 purchased the challenged Products and suffered economic injury because the Products are  
 2 misrepresented. Absent Defendant's business practice of deceptively and unlawfully  
 3 labeling its Products, Plaintiffs and Class members would not have purchased the Products  
 4 or only would have been willing to pay less.

5 199. Plaintiffs will fairly and adequately represent and protect the interests of the  
 6 Class, have no interests incompatible with the interests of the Class, and have retained  
 7 counsel competent and experienced in class action litigation, in particular litigation based on  
 8 allegations of the false and misleading advertising of food products as healthy.

9 200. Class treatment is superior to other options for resolution of the controversy  
 10 because the relief sought for each Class Member is small such that, absent representative  
 11 litigation, it would be infeasible for Class Members to redress the wrongs done to them.

12 201. Questions of law and fact common to the Class predominate over any questions  
 13 affecting only individual Class Members.

14 202. Defendant has acted on grounds applicable to the Class, thereby making  
 15 appropriate final injunctive and declaratory relief concerning the Class as a whole.

16 203. As a result of the foregoing, class treatment is appropriate under Fed. R. Civ. P.  
 17 23(a), (b)(2), and (b)(3).

## 18 **CAUSES OF ACTION**

### 19 **FIRST CAUSE OF ACTION**

#### 20 **Violations of the Unfair Competition Law,**

#### 21 **Cal. Bus. & Prof. Code § 17200 *et seq.***

#### 22 **(By the Nationwide Class or Alternatively the California Class)**

23 204. Plaintiffs reallege and incorporates the allegations elsewhere in the Complaint  
 24 as if set forth in full herein.

25 205. The UCL prohibits any "unlawful, unfair or fraudulent business act or practice."  
 26 Cal. Bus. & Prof. Code §17200.

27 206. The acts, omissions, misrepresentations, practices, and non-disclosures of  
 28 Defendant as alleged herein constitute business acts and practices.

### **Fraudulent**

207. A statement or practice is fraudulent under the UCL if it is likely to deceive the public, applying an objective reasonable consumer test.

208. As set forth herein, the Defendant's claims and omissions relating to the high-sugar Products are likely to deceive reasonable consumers and the public.

### **Unlawful**

209. The acts alleged herein are "unlawful" under the UCL in that they violate at least the following laws:

- The Federal Food, Drug, and Cosmetic Act, 21 U.S.C. §§ 301 *et seq.*
- The False Advertising Law, Cal. Bus. & Prof. Code §§ 17500 *et seq.*;
- Code of Federal Regulations, 21 CFR § 101 *et seq.*
- The Consumers Legal Remedies Act, Cal. Civ. Code §§ 1750 *et seq.*; and
- The California Sherman Food, Drug, and Cosmetic Law, Cal. Health & Safety Code §§ 110100 *et seq.*

### **Unfair**

210. Defendant's conduct with respect to the labeling, advertising, and sale of the high-sugar Products was also unfair because it violated public policy as declared by specific constitutional, statutory or regulatory provisions, including but not limited to the False Advertising Law, portions of the Federal Food, Drug, and Cosmetic Act, and portions of the California Sherman Food, Drug, and Cosmetic Law.

211. Defendant's conduct with respect to the labeling, advertising, and sale of the high-sugar Products was also unfair because the consumer injury was substantial, not outweighed by benefits to consumers or competition, and not one consumers themselves could reasonably have avoided.

212. Defendant's conduct with respect to the labeling, advertising, and sale of the high-sugar Products was unfair because Defendant's conduct was immoral, unethical, unscrupulous, or substantially injurious to consumers and the utility of its conduct, if any, does not outweigh the gravity of the harm to its victims.

213. Neither the economic nor health harm to consumers from purchasing and consuming the high-sugar Products due to the deceptive claims are outweighed by Defendant's increased profits from use of the health and wellness labeling claims and its material omissions.

214. Defendant profited from its sale of the falsely, deceptively, and unlawfully advertised high-sugar Products to unwary consumers.

215. Plaintiffs and Class Members are likely to be damaged by Defendant's deceptive trade practices, as Defendant continues to disseminate misleading information. Thus, injunctive relief enjoining this deceptive practice is proper.

216. Defendant's conduct caused and continues to cause substantial injury to Plaintiffs and the other Class Members, who have suffered injury in fact as a result of Defendant's fraudulent, unlawful, and unfair conduct.

217. In accordance with Bus. & Prof. Code § 17203, Plaintiffs, on behalf of themselves, the Class, and the general public, seek an order enjoining Defendant from continuing to conduct business through unlawful, unfair, or fraudulent acts and practices, and to commence a corrective advertising campaign.

218. Plaintiffs, on behalf of themselves and the Class also seek an order for disgorgement and restitution of all monies from the sale of the high-sugar Products, which were unjustly acquired through acts of unlawful, unfair, and fraudulent competition.

## **SECOND CAUSE OF ACTION**

### **Violations of the False Advertising Law,**

### **Cal. Bus. & Prof. Code §§ 17500 *et seq.***

#### **(By the Nationwide Class or Alternatively the California Class)**

219. Plaintiffs reallege and incorporates the allegations elsewhere in the Complaint as if set forth in full herein.

220. Under the FAL, "[i]t is unlawful for any person, firm, corporation or association, or any employee thereof with intent directly or indirectly to dispose of real or personal property or to perform services" to disseminate any statement "which is untrue or



misleading, and which is known, or which by the exercise of reasonable care should be known, to be untrue or misleading.” Cal. Bus. & Prof. Code § 17500.

221. It is also unlawful under the FAL to disseminate statements concerning property or services that are “untrue or misleading, and which is known, or which by the exercise of reasonable care should be known, to be untrue or misleading.” *Id.*

222. As alleged herein, the advertisements, labeling, policies, acts, and practices of Defendant relating to the high-sugar Products misled consumers acting reasonably as to the healthfulness of the high-sugar Products.

223. Plaintiffs suffered injury in fact as a result of Defendant’s actions as set forth herein because Plaintiffs purchased the high-sugar Products in reliance on Defendant’s false and misleading marketing claims and lost money as a result.

224. Defendant’s business practices as alleged herein constitute unfair, deceptive, untrue, and misleading advertising pursuant to the FAL because it has advertised the high-sugar Products in a manner that is untrue or misleading, which it knew or reasonably should have known.

225. Defendant profited from its sales of the falsely and deceptively advertised high-sugar Products to unwary consumers.

226. As a result, pursuant to Cal. Bus. & Prof. Code § 17535, Plaintiffs and the Class are entitled to injunctive and equitable relief, restitution, and an order for the disgorgement of the funds by which Defendant was unjustly enriched.

### **THIRD CAUSE OF ACTION**

#### **Violations of the Consumer Legal Remedies Act,**

#### **Cal. Civ. Code §§ 1750 *et seq.***

#### **(By the Nationwide Class or Alternatively the California Class)**

227. Plaintiffs reallege and incorporates the allegations elsewhere in the Complaint as if set forth in full herein.

228. The CLRA prohibits deceptive practices in connection with the conduct of a business that provides goods, property, or services primarily for personal, family, or household purposes.

229. Defendant's false and misleading labeling and other policies, acts, and practices described herein were designed to, and did, induce the purchase and use of Defendant's high-sugar Products for personal, family, or household purposes by Plaintiffs and other Class Members, and violated and continue to violate at least the following sections of the CLRA:

a. § 1770(a)(5): representing that goods have characteristics, uses, or benefits which they do not have;

b. § 1770(a)(7): representing that goods are of a particular standard, quality, or grade if they are of another;

c. § 1770(a)(9): advertising goods with intent not to sell them as advertised; and

d. § 1770(a)(16): representing the subject of a transaction has been supplied in accordance with a previous representation when it has not.

230. Defendant profited from its sales of the falsely, deceptively, and unlawfully advertised high-sugar Products to unwary consumers.

231. Defendant's wrongful business practices regarding the high-sugar Products constituted, and constitute, a continuing course of conduct in violation of the CLRA.

232. Pursuant to California Civil Code § 1782, Plaintiffs sent written notice to Defendant of their claims, attached hereto as Attachment A, but Defendant failed to remedy the violations within 30 days thereafter. Because Defendant failed to implement remedial measures, Plaintiffs on behalf of himself and the Class, seeks injunctive relief under Civil Code § 1782(d), as well as statutory, actual, and punitive damages, including attorneys' fees.

233. Filed concurrently with the Complaint, attached hereto as Attachment B, is Plaintiff, Howard Clarks venue of affidavit as required under California Civil Code § 1782.

**FOURTH CAUSE OF ACTION**

**Breaches of Express Warranties,**

**Cal. Com. Code § 2313(1)**

**(By the Nationwide Class or Alternatively the California Class)**

234. Plaintiffs reallege and incorporates the allegations elsewhere in the Complaint as if set forth in full herein.

235. Through the following labeling statements on the high-sugar Products, Defendant made affirmations of fact or promises, or description of goods regarding the health and nutrition properties of the Products, specifically through the labeling promises listed below:

a. “Our Story [:] You could say our dad, Dr. Bud Keith, was grounded in nutrition, he was a health food pioneer before many people had heard of ‘health food’ and he and mom were determined to help us eat right. One day, after mixing a variety of superfood blends into organic peanut butter and honey-dad proclaimed, ‘it’s perfect,’ and the Perfect Bar was born. Today, the oldest of the Keith kids are sharing dad’s recipe with the world. No chemicals, preservatives or refined sugar. Just an incredible combination of nutrition and taste that’s grounded in perfection. Enjoy.”

b. “Our Family Story [:] Our dad, Bud Keith, was a health food pioneer before most folks had heard of ‘health food.’ To help our king size family eat right on the go, he mixed organic nut butter and honey with a superfood blend and proclaimed, ‘It’s perfect!’ – and the Perfect Bar recipe was born. Today, us kids are sharing dad’s fresh protein bar recipe with the world. Combining whole food protein, clean ingredients and incredible taste. It’s a bar so fresh, it belongs in the fridge. Get the whole nutty story at perfectbar.com.”

236. These representations were “part of the basis of the bargain” in that Plaintiffs and the Class purchased the high-sugar Products in reasonable reliance on those statements. Cal. Com. Code § 2313(1).

237. Defendant breached its express warranties by selling Products that are not healthy, but contain high amounts of added sugar, which is harmful to health.

238. Plaintiffs sent Defendant, via certified mail, notice of its breaches of express and implied warranties on June 22, 2018, and on September 11, 2018 in letters attached hereto as Attachment A.

239. That breach actually and proximately caused injury in the form of the lost purchase price that Plaintiffs and Class members paid for the high-sugar Products.

240. As a result, Plaintiffs seeks, on behalf of themselves and other Class Members, their actual damages arising as a result of Defendant's breaches of express warranty.

### **FIFTH CAUSE OF ACTION**

#### **Breach of Implied Warranty of Merchantability,**

#### **Cal. Com. Code § 2314**

#### **(By the Nationwide Class or Alternatively the California Class)**

241. Plaintiffs reallege and incorporates the allegations elsewhere in the Complaint as if set forth in full herein.

242. Defendant, through its acts set forth herein, in the sale, marketing, and promotion of the high-sugar Products, made representations to Plaintiffs and the Class regarding the health and nutrition properties of the Products, specifically through the labeling promises listed below:

a. "Our Story [:] You could say our dad, Dr. Bud Keith, was grounded in nutrition, he was a health food pioneer before many people had heard of 'health food' and he and mom were determined to help us eat right. One day, after mixing a variety of superfood blends into organic peanut butter and honey-dad proclaimed, 'it's perfect,' and the Perfect Bar was born. Today, the oldest of the Keith kids are sharing dad's recipe with the world. No chemicals, preservatives or refined sugar. Just an incredible combination of nutrition and taste that's grounded in perfection. Enjoy."

b. "Our Family Story [:] Our dad, Bud Keith, was a health food pioneer before most folks had heard of 'health food.' To help our king size family eat right on

1 the go, he mixed organic nut butter and honey with a superfood blend and proclaimed,  
2 ‘It’s perfect!’ – and the Perfect Bar recipe was born. Today, us kids are sharing dad’s  
3 fresh protein bar recipe with the world. Combining whole food protein, clean  
4 ingredients and incredible taste. It’s a bar so fresh, it belongs in the fridge. Get the  
5 whole nutty story at perfectbar.com.”

6 243. Defendant is a merchant with respect to the goods of this kind which were sold  
7 to Plaintiffs and the Class, and there was, in the sale to Plaintiffs and other consumers, an  
8 implied warranty that those goods were merchantable.

9 244. However, Defendant breached that implied warranty in that the high-sugar  
10 Products are harmful to health, increasing risk of cardiovascular disease, obesity, liver  
11 disease and other serious diseases.

12 245. These representations were “part of the basis of the bargain” in that Plaintiffs  
13 and the Class purchased the Products in reasonable reliance on those statements.

14 246. As an actual and proximate result of Defendant’s conduct, Plaintiff and the  
15 Class did not receive goods as impliedly warranted by Defendant to be merchantable in that  
16 they did not conform to promises and affirmations made on the container or label of the  
17 goods.

18 247. Plaintiffs sent Defendant, via certified mail, notice of its breaches of express  
19 and implied warranties on June 22, 2018 and September 11, 2018 in letter attached hereto as  
20 Attachment A.

21 248. Plaintiffs and the Class have sustained damages as a proximate result of the  
22 foregoing breach of implied warranty in the amount of the high-sugar Products’ purchase  
23 price.

24 249. Plaintiffs on behalf of themselves and the Class seeks actual damages resulting  
25 from Defendant’s breach.  
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**SIXTH CAUSE OF ACTION**  
**Unfair And Deceptive Business Practices,**  
**N.Y. Gen. Bus. L. § 349**  
**(Alternatively By the New York Class)**

250. Plaintiff Sims realleges and incorporates the allegations elsewhere in the Complaint as if fully set forth herein.

251. Defendant's conduct constitutes deceptive acts or practices or false advertising in the conduct of business, trade or commerce or on the furnishing of services in New York which affects the public interest under N.Y. Gen. Bus. L. § 349.

252. As alleged herein, by advertising, marketing, distributing, and selling the high-sugar products with false or misleading claims and representations, Defendant engaged in, and continues to engage in, deceptive acts and practices.

253. As alleged herein, by misbranding the high-sugar products, Defendant engaged in, and continues to engage in, unlawful and deceptive acts and practices.

254. Defendant's conduct was materially misleading to Plaintiff and the Class. During the Class Period, Defendant carried out a plan, scheme and course of conduct which was consumer oriented.

255. As a direct and proximate result of Defendant's violation of N.Y. Gen. Bus. L. § 349, Plaintiff and the New York Class were injured and suffered damages.

256. The injuries to Plaintiff and the New York Class were foreseeable to Defendant and, thus Defendant's actions were unconscionable and unreasonable.

257. Defendant is liable for damages sustained by Plaintiff and the New York Class to the maximum extent allowable under N.Y. Gen. Bus. L. § 349.

258. On behalf of himself and other members of the New York Class, Plaintiff seeks to enjoin the unlawful acts and practices described herein, to recover actual damages or fifty dollars per violation, whichever is greater, three times actual damages for knowing and willful violations, and reasonable attorneys' fees.



**SEVENTH CAUSE OF ACTION**

**False Advertising,**

**N.Y. Gen. Bus. L. § 350**

**(Alternatively By the New York Class)**

259. Plaintiff Sims realleges and incorporates the allegations elsewhere in the Complaint as if fully set forth herein.

260. Defendant has engaged and is engaging in consumer-oriented conduct which is deceptive or misleading in a material way, constituting false advertising in the conduct of any business, trade, or commerce, in violation of N.Y. Gen. Bus. L. § 350.

261. As a result of Defendant's false advertising, Plaintiff and the New York Class have suffered and continue to suffer substantial injury, including damages, which would not have occurred but for the false and deceptive advertising, and which will continue to occur unless Defendant is permanently enjoined by this Court.

262. On behalf of himself and other members of the New York Class, Plaintiff seeks to enjoin the unlawful acts and practices described herein, to recover actual damages or five hundred dollars per violation, whichever is greater, three times actual damages for willful or knowing violations, and reasonable attorneys' fees.

**EIGHTH CAUSE OF ACTION**

**Breach of Express Warranty**

**N.Y. U.C.C. § 2-313**

**(Alternatively By the New York Class)**

263. Plaintiff Sims realleges and incorporates the allegations elsewhere in the Complaint as if fully set forth herein.

264. In selling the high-sugar Products to Plaintiff and the Class, Defendant made affirmations of fact or promise regarding the health properties of the Product through the following statements:

a. "Our Story You could say our dad, Dr. Bud Keith, was grounded in nutrition, he was a health food pioneer before many people had heard of 'health food'

1 and he and mom were determined to help us eat right. One day, after mixing a variety  
2 of superfood blends into organic peanut butter and honey-dad proclaimed, ‘it’s  
3 perfect,’ and the Perfect Bar was born. Today, the oldest of the Keith kids are sharing  
4 dad’s recipe with the world. No chemicals, preservatives or refined sugar. Just an  
5 incredible combination of nutrition and taste that’s grounded in perfection. Enjoy.”

6 b. “Our Family Story [:] Our dad, Bud Keith, was a health food pioneer  
7 before most folks had heard of ‘health food.’ To help our king size family eat right on  
8 the go, he mixed organic nut butter and honey with a superfood blend and proclaimed,  
9 ‘It’s perfect!’ and the Perfect Bar recipe was born. Today, us kids are sharing dad’s  
10 fresh protein bar recipe with the world. Combining whole food protein, clean  
11 ingredients and incredible taste. It’s a bar so fresh it belongs in the fridge. Get the  
12 whole nutty story at [perfectbar.com](http://perfectbar.com).”

13 265. These representations were “part of the basis of the bargain” in that Plaintiff  
14 and the New York Class purchased the Products in reasonable reliance on those statements.

15 266. Defendant breached its express warranties by selling Products that are not  
16 nutritious or healthful, but are harmful to health, increasing risk of cardiovascular disease,  
17 obesity, liver disease and other serious diseases.

18 267. That breach actually and proximately caused injury in the form of the lost  
19 purchase price that Plaintiff and the Class paid for the high-sugar Products.

20 268. Defendant was sent notice, via certified mail, of its breaches of express and  
21 implied warranties on June 22, 2018 and September 11, 2018 in letters attached hereto as  
22 Attachment A.

23 269. Plaintiff, on behalf of himself and the New York Class, seeks actual damages  
24 for Defendant’s breach of warranty.  
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**NINTH CAUSE OF ACTION**

**Breach of Implied Warranty of Merchantability**

**N.Y. U.C.C. § 2-314**

**(Alternatively By the New York Class)**

270. Plaintiff Sims realleges and incorporates the allegations elsewhere in the Complaint as if fully set forth herein.

271. Defendant, through its acts set forth herein, in the sale, marketing, and promotion of the Products, made representations to Plaintiff and the Class regarding the health and nutrition properties of the Products through the following labeling promises:

a. “Our Story You could say our dad, Dr. Bud Keith, was grounded in nutrition, he was a health food pioneer before many people had heard of ‘health food’ and he and mom were determined to help us eat right. One day, after mixing a variety of superfood blends into organic peanut butter and honey-dad proclaimed, ‘it’s perfect,’ and the Perfect Bar was born. Today, the oldest of the Keith kids are sharing dad’s recipe with the world. No chemicals, preservatives or refined sugar. Just an incredible combination of nutrition and taste that’s grounded in perfection. Enjoy.”

b. “Our Family Story [:] Our dad, Bud Keith, was a health food pioneer before most folks had heard of ‘health food.’ To help our king size family eat right on the go, he mixed organic nut butter and honey with a superfood blend and proclaimed, ‘It’s perfect!’ and the Perfect Bar recipe was born. Today, us kids are sharing dad’s fresh protein bar recipe with the world. Combining whole food protein, clean ingredients and incredible taste. It’s a bar so fresh it belongs in the fridge. Get the whole nutty story at perfectbar.com.”

272. Defendant is a merchant with respect to the goods of this kind, which were sold to Plaintiff and the Class, and there was, in the sale to Plaintiff and other consumers, an implied warranty that those goods were merchantable and conformed to the promises made on the Products’ labeling.

1        273. These representations were “part of the basis of the bargain” in that Plaintiff  
2 and the Class purchased the Products in reasonable reliance on those statements.

3        274. However, Defendant breached that implied warranty in that the Products are  
4 not adequately labeled, and do not conform to the promises or affirmations of fact made on  
5 the label because the composition of the Products is not healthful.

6        275. As an actual and proximate result of Defendant’s conduct, Plaintiff and the New  
7 York Class did not receive goods as impliedly warranted by Defendant to be merchantable  
8 in that they did not conform to promises and affirmations made on the container or label of  
9 the goods.

10        276. Plaintiff and the New York Class have sustained damages as a proximate result  
11 of the foregoing breach of implied warranty in the amount of the Products’ purchase price.

12        277. Defendant was sent notice, via certified mail, of its breaches of express and  
13 implied warranties on June 22, 2018 and September 11, 2018 in letters attached hereto as  
14 Attachment A.

15        278. Plaintiff, on behalf of himself and the New York Class, seeks actual damages  
16 for Defendant’s breach of warranty.

17                                    **PRAYER FOR RELIEF**

18        279. Wherefore, Plaintiffs, on behalf of themselves, all others similarly situated, and  
19 the general public, pray for judgment against Defendant as to each and every cause of action,  
20 and the following remedies:

21            A.     An Order declaring this action to be a proper class action, appointing  
22 Plaintiffs as class representatives, and appointing undersigned counsel as class  
23 counsel;

24            B.     An Order requiring Defendant to bear the cost of class notice;

25            C.     An Order enjoining Defendant from using any challenged labeling or  
26 marketing claim that is found to be false, misleading, or unlawful, or that breaches a  
27 warranty;  
28

D. An Order compelling Defendant to conduct a corrective advertising campaign;

E. An Order compelling Defendant to destroy all misleading and deceptive advertising materials and the high-sugar Products' labels;

F. An Order requiring Defendant to pay restitution to restore all funds acquired by means of any act or practice declared by this Court to be an unlawful, unfair, or fraudulent business act or practice, or untrue or misleading advertising;

G. An Order requiring Defendant to pay actual, compensatory, statutory, and punitive damages where permitted by law;

H. Pre- and post-judgment interest where available;

I. An award of attorneys' fees and costs;

J. Any other and further relief that Court deems necessary, just, or proper.

**JURY DEMAND**

Plaintiffs hereby demand a trial by jury on all issues so triable.

Dated: September 28, 2018

/s/ Paul K. Joseph

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